

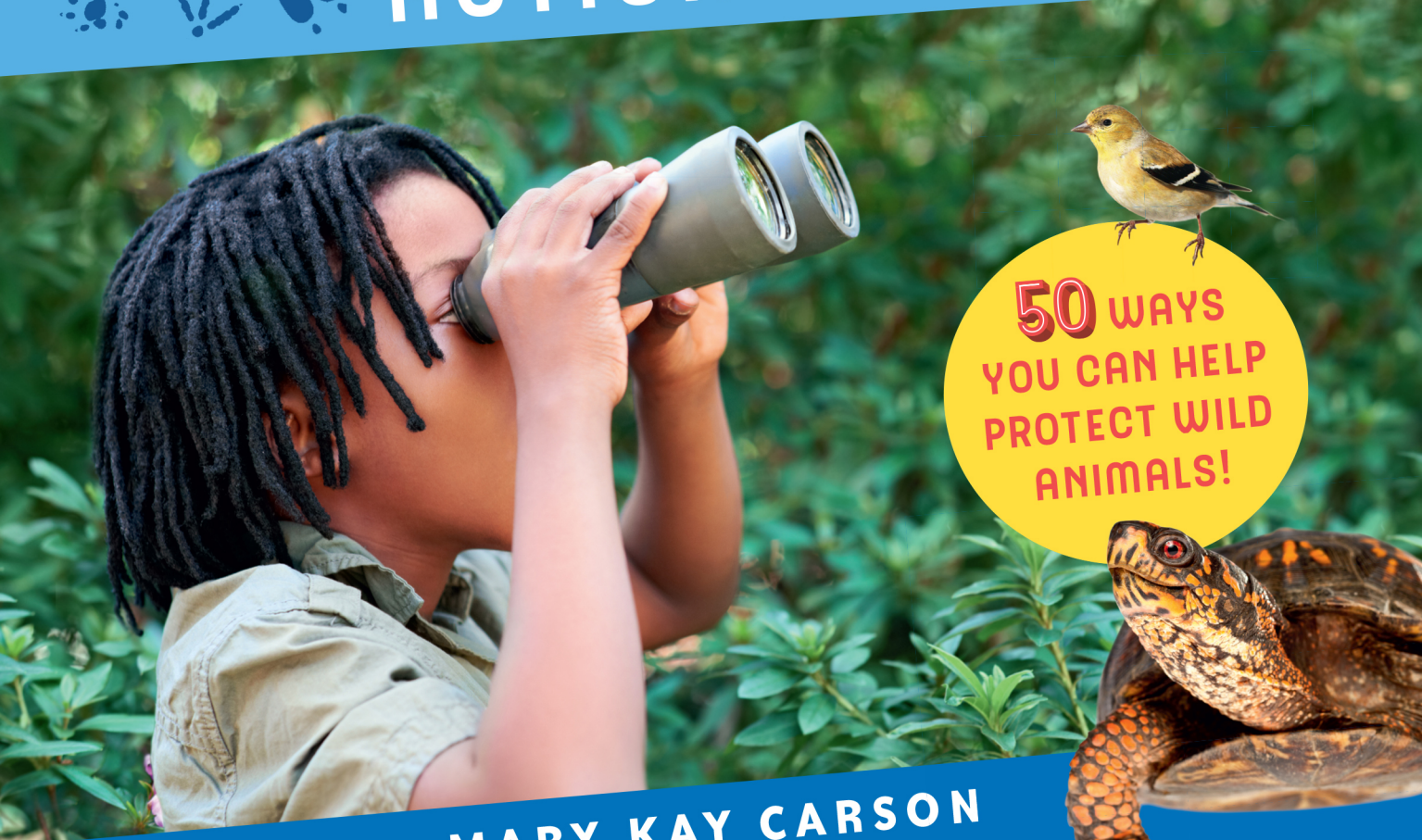


TRACK, SPOT & PROVIDE HEALTHY HABITAT
FOR CREATURES CLOSE TO HOME

WILDLIFE RANGERS



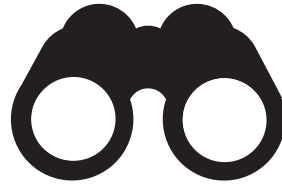
ACTION GUIDE



50 WAYS
YOU CAN HELP
PROTECT WILD
ANIMALS!



MARY KAY CARSON



MARY KAY CARSON

WILDLIFE RANGER

ACTION GUIDE



Storey Publishing

**The mission of Storey Publishing is to serve our customers by
publishing practical information that encourages
personal independence in harmony with the environment.**

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This book is dedicated to the wild
creatures of Chuckland, the backyard
nature sanctuary of the author and
photographer Tom Uhlman.

A BIG THANKS
to our terrific kid
helpers and wildlife
photographer Steve
Maslowski.



1

YOU CAN SAVE WILD ANIMALS!

6

Wildlife
Spotting Blind

16

Water Watch

18

Test Feeders

19

Little Critters
Paw Printer

20

Sandpit Tracks Trap

22

Safari Survey

23

Beneficial Bug Bait

24

Nightlife Light Trap

25



2

COME ON IN, FEATHERED FRIENDS

26

Coffee Tub Nest Box

30

Anti-Crash
Window Clings

32

Homemade
Hummer Feeder

34

Hummer Swing

36

Seedy Sock

37

Bird Alert Scrunchy

38

Ornaments for
the Birds

40

Quick-and-Easy
Suet Cakes

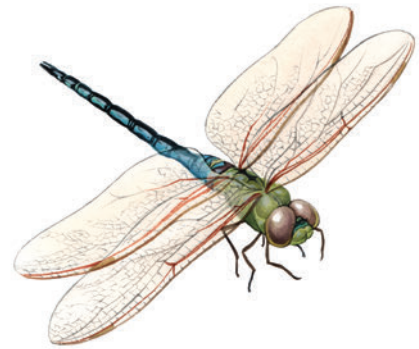
42

Who's That Singing?

45

BIRDS
FIELD GUIDE

46



3

ATTRACT BUTTERFLIES, BEES & OTHER BUGGY BUDDIES

68

Be Home, Bees

72

Bee Blocks
and Boxes

74

Butterfly Café

76

BUGS & INSECTS
FIELD GUIDE

80



BRING IN
**TURTLES,
LIZARDS
& OTHER
SCALY
PALS**

98

Lizard Lodge

102

Turtle Spa

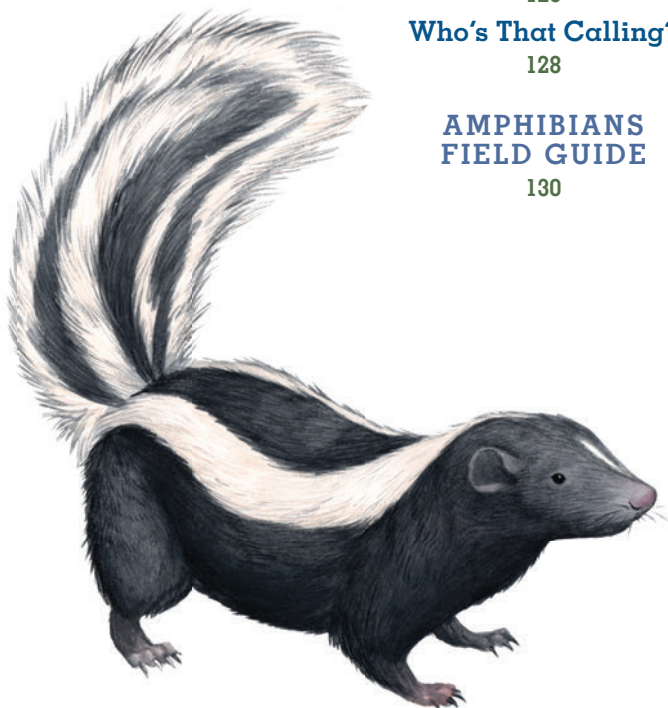
104

Turtle Patrol

106

**REPTILES
FIELD GUIDE**

108



WELCOME
**FROGS,
SALAMANDERS
& OTHER SLIPPERY
NEIGHBORS**

118

Kiddie-Pool Frog Pond

122

Tree Frog Hideouts

124

Toad Abodes

126

Who's That Calling?

128

**AMPHIBIANS
FIELD GUIDE**

130



HELP OUT YOUR
**FURRY
FRIENDS**

138

Eat-in Diner

142

Nutty Wreath

144

Paint a Bat House

146

Sweet & Salty
Deer Block

148

Corn Cob
Jungle Gym

150

**MAMMALS
FIELD GUIDE**

152

Wildlife Words to Know

172

Find Out More:
Resources

174

Index

176

GRAY
SQUIRREL

1

YOU CAN SAVE

WILD
ANIMALS!

GRASSHOPPER





RED SQUIRREL

WILDLIFE NEEDS YOUR HELP!

You may think of wildlife as being African elephants and Antarctic penguins, but there's wildlife all around you. How can you save the wild animals, like birds, foxes, butterflies, and turtles, that live in your neighborhood?

By becoming a backyard ranger and making your own yard more wildlife friendly! You can do this by creating habitats — places where butterflies find food, frogs seek shelter, nuthatches nest, or deer drink water. Caring for close-by creatures is exciting and fun, plus it's super important. Here are some reasons why:

- **LACK OF SPACE.** Just like us, wild animals need places to live. But when people pave over prairies and cut down forests, the open space and habitat that wildlife needs are lost. When chunks of natural land are separated by highways, streets, buildings, and towns, the result is habitat fragmentation.



A WILDLIFE RANGER PROTECTS ANIMALS AND THE PLACES THEY LIVE. THIS BOOK IS FULL OF PROJECTS AND ACTIVITIES THAT HELP PROTECT THE ANIMALS AROUND YOU. BE A WILDLIFE RANGER RIGHT IN YOUR OWN BACKYARD!

GREAT HORNED OWL





MAKE YOUR
YARD A BETTER
PLACE FOR
WILD ANIMALS
AND WATCH AS
WOODPECKERS,
DRAGONFLIES,
CHIPMUNKS,
TOADS, OR
OTHER ANIMALS
SHOW UP.

- **BROKEN-UP HABITATS** make it harder for animals to find enough food, water, and shelter to survive. A large, connected habitat supports more species (types) of wildlife than a bunch of divided ones. More species of animals and plants equals biodiversity, which is better for the environment.
- **LACK OF FOOD.** Most lawns, farms, and city parks aren't natural habitats. The grass, vegetables, trees, and bushes that grow there are often non-native plants imported from other continents, countries, or regions. Some are harmful invasive plants. Animals depend on specific native plants for shelter, nesting places, and food.

For example, monarch caterpillars only eat milkweed. If non-native plants crowd out all the milkweed, the caterpillars starve and don't become butterflies. Then the birds that eat the butterflies go hungry, too. Non-native plants mess up the food web for everyone!



WHO EATS WHAT?



A fox eats a bird that ate a snail that ate a plant.

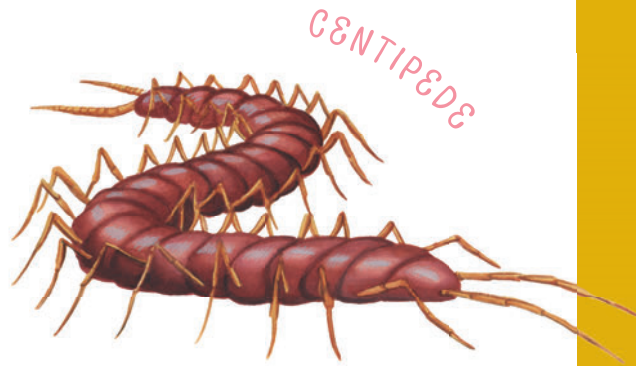


This food chain shows how energy passes from plants up through animals.

An ecosystem is a combination of many crisscrossing food chains called a food web.



- **HUMAN-CAUSED HAZARDS.** Many farmers, homeowners, and gardeners use chemicals that harm insects and pollute water. Glass buildings and windows confuse birds, who crash into them. Cars and trucks run over animals on highways. Pet dogs and cats kill wildlife, too. Rats, starlings, and other non-native animals also harm wildlife by taking over needed habitat.



CENTIPEDES



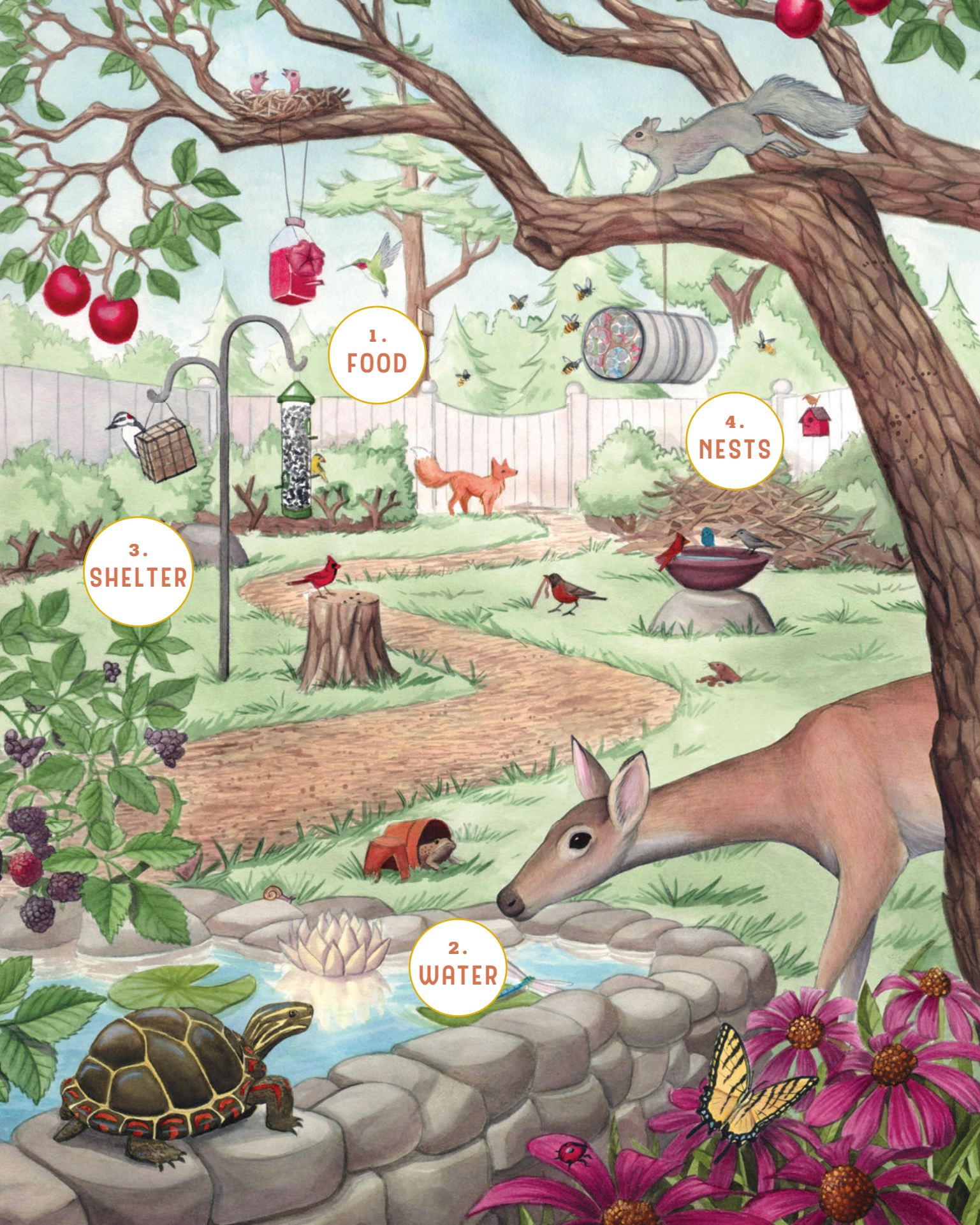
CREATING NATURAL HABITATS = SAVING WILD ANIMALS

Now you know why wildlife needs your help. It's time to find out what you can do. Here's the secret formula, the **Big Four** ingredients of wildlife habitats: food, water, shelter, and nests.

1. **FOOD.** Do the right kinds of seeds or fruits grow nearby? Is there enough prey for animals to hunt?
2. **WATER.** Can animals find safe drinking water year-round?
3. **SHELTER.** Is there cover to hide from predators? Can animals find protection from rain and cold? Are there safe sleeping sites?
4. **NESTS.** Are there places for animals to raise their young? Are the right materials around to build nests?



One backyard can't provide all of the Big Four for every animal, but if we each do a little, it adds up to big differences. What you do in your backyard to help wildlife helps animals in the whole neighborhood. You can find lots of fun ways to share your yard with fawns, chickadees, butterflies, chipmunks, and ladybugs. Let's get started!



1.
FOOD

4.
NESTS

3.
SHELTER

2.
WATER



THIS CHAPTER
HAS PROJECTS,
ACTIVITIES, AND
INFORMATION TO
HELP YOU SURVEY
THE WILDLIFE IN
YOUR BACKYARD.

WHO LIVES NEAR ME?

Are there toads hiding in your garden? Shrews scurrying under backyard leaves? A couple of crows hanging out in a high branch of a nearby tree? The first step to helping local wildlife is to find out which animals live around you.

Remember, all animals need access to safe water, suitable food, and the right kind of shelter and nesting spaces. Look for wildlife where there's water, food, and shelter in your neighborhood.

BE WILDLIFE AWARE

Exploring your yard is exciting and enjoyable. Keep it that way by knowing what to avoid.

- Beware of itchy, rash-causing plants like poison ivy and poison oak. *Leaves of three, leave it be!*
- Watch out for bugs that can sting or bite like wasps, bees, ticks, and centipedes. If you're not sure, don't pick it up.
- Are there venomous snakes where you live? Learn what they look like.
- Hands off wild furry animals! They can carry rabies, a serious disease. If a raccoon or bat isn't fleeing when it sees you, it's likely sick or injured. Find a grown-up.





USING THIS BOOK

Once you have an idea of the kinds of animals living around you, you can improve the habitat of the current creatures as well as plan for future visitors. This book is all about observing, improving, and creating natural habitats. Each chapter has information, activities, and projects designed to attract and support birds, bugs, reptiles, amphibians, and mammals.

Look for these icons on the pages for extra tips and ideas.



Links to woodworking plans and printable pages that help you take it to the next level



Suggestions for what to note, list, sketch, or document in your Wild Notes notebook (page 15)



CHECK THIS OUT!

Information about making your backyard ecosystem more welcoming and planting native plants to attract wildlife

BECOME A CITIZEN SCIENTIST!

Do you want to learn more and do more to save wild animals? People of all ages are taking action to help wildlife everywhere. Citizen scientists can assist professional scientists in many ways. One example is helping researchers gather data by reporting how many frogs or birds are spotted in a particular area from year to year.

Check out page 175 for ways to join the greater conservation community. You're not alone!

Scientific name
to use when
looking up further
information at the
library or online

THE FIELD GUIDE PAGES at the ends of chapters 2 through 6 will help you identify which birds are feasting at the feeders, which insect just buzzed by your ear, and what fluffy thing disappeared down that hole. The pages are color-coded by chapter and look like this:

LADY BEETLE

Coccinellidae

Small, oval beetle with black dots on red wing covers

WHERE DO I LIVE?

Map showing where the animal lives in North America

Size, color, sounds, and other clues for quick identification

IDENTIFY ME	BODY about 1/8 inch (5 mm) long COLOR Black spots on red wing covers
LOOK FOR ME	Woods, meadows, gardens, and parks
WHAT I EAT	Aphids, mites, and other small bugs

SOME THINGS TO KNOW ABOUT ME

These small beetles come in many colors and patterns. Some people call them ladybugs or ladybird beetles.

There are more than one hundred kinds of lady beetles in the United States. The similar-looking Asian lady beetle is a different species and is considered invasive.

Lady beetles are a gardener's friend. They eat plant pests, like aphids.

Females lay clusters of 15 to 30 bright yellow eggs on plants during spring and summer.

ASIAN LADY BEETLE

BUGS & INSECTS

ATTRACT BUTTERFLIES, BEES & OTHER BUGGY BUDDIES 89

Places you're likely to see this animal



Print out some starter pages for your notebook. Look for the web address on page 175.

Making the world — including your yard — a better place for animals takes time and patience. Plants don't grow overnight. Bats and birds need time to move in. Every backyard is different. Improving your particular habitat will take some experimenting. That's why it's important to keep track of your progress.

TAKING NOTES

Create a Wild Notes notebook for recording your observations, projects, and successes. Use any kind of notebook with plenty of blank pages. A ringed binder works well because you can add pages to it with a hole puncher. If you're a more techy kind of kid, you could create a Wild Notes file folder on the computer or use a journaling app.



What should go in your notebook? Look for suggestions throughout the book.

Here are some more ideas:

- Landscape-style map of your yard for planning
- Notes on successes, failures, and ideas for improvement
- Lists of animals seen with dates, time of day, and locations
- Sketches or photos of unknown birds and other animals to try to identify
- Notes on which kinds of feeders and foods seem to attract which animals
- Photographs or fact sheets from other sources
- Nature poetry and art



WILD NOTES NOTEBOOK



MATERIALS

2 or 3 outdoor chairs

A large tarp or several yards of mesh or netting

Clothespins or large binder clips

Scissors

Binoculars (optional)

WILDLIFE SPOTTING BLIND

Wild animals are shy of people. Building a blind, or a place where you can hide, will camouflage you, making the creatures in your yard easier to spy on. Happy wildlife spotting!

HOW TO



1 Set up some chairs and drape the tarp or netting over them. Use clothespins to clip the tarp ends onto the chairs. Make sure you leave an opening so you can get in and out!



2 Cut some peek-through flaps in the sides of the tarp. Check that they're at the right height from the inside.



3 Gather some leaves, twigs, and thin branches and use them to camouflage the fort.



4 Start watching! Snap photos and take notes on what you see. Make sure to include the time of day and the date.



WATER WATCH

Try attracting different animals by offering a source of water.

Gather a few planter saucers, old dinner plates, or other shallow dishes.

Place them around the yard at different heights — on the ground, on a table or stump, or wedged between bush branches. Fill the saucers with water and check water levels each day.

Put a couple near your Wildlife Spotting Blind, if you made one.

Rocks provide landing spots for butterflies and other smaller visitors.

TEST FEEDERS

Putting out test feeders is a great way to discover which birds are around and what their favorite foods are.

Place a few near your Wildlife Spotting Blind, if you made one.

Hang some using yarn or string and set others on the ground or on a picnic table or large rock.

Add a dowel for a landing perch.

Juice jugs, milk cartons, soda bottles, yogurt cups, and other recycling bin goodies make perfect temporary test feeders.

Wash all containers thoroughly with hot, soapy water and let dry completely before filling.

Use different types of seed in each feeder to see which attracts the most birds.

Cut holes in larger containers, leaving a lip to hold the seeds.

Keep notes on which birds are attracted to which feeders.



MATERIALS

Scissors

½-gallon (2L)
coated milk or
juice carton

Packing or
duct tape

Felt

Waterproof glue

Peanut butter

Small paintbrush

Washable,
nontoxic poster
paint in a dark
color

White paper

Paper clips

LITTLE CRITTERS PAW PRINTER

Mice, voles, shrews, and other small animals like to be hidden. They stay safe by traveling along pathways belowground or under tall grass. This critter tunnel captures tiny tracks so you can find out who's scurrying unseen around your yard.

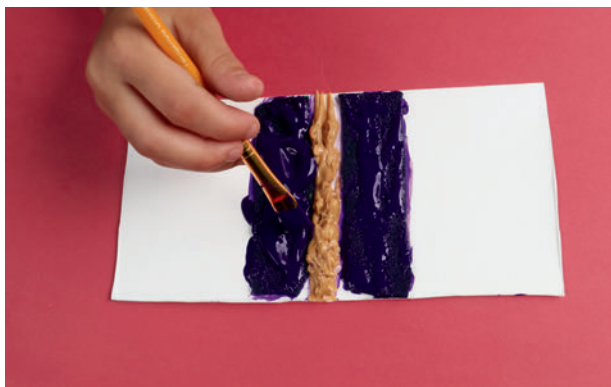
HOW TO



- 1 Cut off the top and bottom of the carton. Cut off one of the sides; this becomes the printing tray. Fold the carton into a triangle and tape it closed to make the tunnel.



- 2 Trim the leftover carton side until it easily slides in and out of the tunnel. Cut two strips of felt, each 1 inch (2.5 cm) wide and as long as the printing tray is wide. Glue them near the middle of the tray, leaving an inch or so gap in the very center. That's where the bait goes! Let dry.



- 3 Smear a line of peanut butter between the felt strips. Use the paintbrush to soak the felt with a thick layer of paint.



- 4 Cut two rectangles of paper, one to fit on each end of the printing tray. Attach with paper clips. Carefully slide the tray into the tunnel.

Set your paw printer on the ground at dusk near some trees or alongside a patio or fence line. Check for tracks after a few hours or in the morning.



Mouse

WHO TRAVELED
THROUGH
YOUR TUNNEL?



Squirrel



Shrew



Chipmunk

SANDPIT TRACKS TRAP

Just because you don't see them doesn't mean they're not there. Animal tracks are proof positive that creatures are around. Another way to trap some tracks is to make a sandpit.

Before you go to bed, spread a thick layer of sand on the ground.

Set out a small dish of pet food.



Photograph or draw the tracks to help you identify who made them.



Check the sandpit for tracks the next morning.

Look overhead
and up into trees
for birds. Are
there any nests
around?

SAFARI SURVEY

Grab a hand lens,
binoculars, and your
notebook and head out
on a backyard safari.

Look for
leftovers like
nutshells, clipped
plants, slug slime
trails, owl pellets, and
scat, which is the
scientific word for
animal poop.

Turn over
rocks and logs,
look under fallen
leaves, and study
puddles to hunt for
bugs, toads, and
salamanders.

Scan for signs
that animals are
about. Check for
footprints, feathers,
bits of fur, scratches
on tree trunks, and
flattened patches
of grass.



Take photos or
make notes of the
insects that show up,
including after dark.

BENEFICIAL BUG BAIT

Gardeners like insects that eat plant pests such as aphids. To lure beneficial bugs, like this praying mantis, into their gardens, they put out attractants. That's just a fancy word for bug bait! Mix up your own and see what happens.

Thoroughly mix the following ingredients. Pour the mixture into a clean spray bottle.

- 5 teaspoons (25 mL) sugar
- 5 teaspoons (25 mL) powdered yeast
- 1 cup (240 mL) warm water



Spray the bug bait onto bushes and plants around the yard. Tie ribbons or yarn to mark where you're spraying.



Hang a white bedsheet from a strung rope, over a fence, or between some tree branches. Choose a dark area away from street or porch lights.

Lots of insects like the nightlife! Get a glance at who's flying around in your yard after dark by setting up a light trap.

NIGHTLIFE LIGHT TRAP

Watch the moths and beetles fly toward the light!

Shine a strong flashlight on the sheet. A portable ultraviolet lamp, also called a black light, will attract a wider variety of bugs.

 Record the nocturnal visitors in your Wild Notes notebook and include photos if possible.



GULL

2



TURKEY

COME ON IN, FEATHERED FRIENDS



BIRDS ARE FUN to watch and identify. They're colorful, lively, and musical. Most birds are also out and about during the day, making them easier to observe than nocturnal (nighttime) animals. And they're right in your backyard.



SAVANNAH SPARROW

BIRDS NEED A LOT OF FOOD. They're warm-blooded and must eat to burn enough energy to keep their body temperature steady. Different birds eat different foods. Hummingbirds sip nectar, hawks hunt squirrels, wrens catch bugs, and finches snack on seeds. You need to know who eats what to create good bird habitat. A source of water will attract a variety of birds.

BIRDS LAY EGGS, and most birds build a nest to lay them in. Good bird habitat has places to nest and provides the materials needed to make the nest — sticks, grasses, lichen, mud, and so on. Birds use bushes, trees, and other plants to shelter from bad weather and to hide from predators. These safe spots are called cover.



FOOD, WATER,
AND SHELTER
HELP BIRDS THAT
ONLY STAY FOR A
SEASON OR ARE
JUST PASSING
THROUGH, TOO.



HOUSE WREN



BLUE JAY
FEATHERS

NATURAL HABITAT IS IMPORTANT for more than the birds that live there year-round. Many birds migrate, traveling hundreds of miles between summer and winter homes. Migrating birds can't get where they're going without safe stopovers. They need to fuel up on food and clean water.

BIRDS BATTLE MANY THREATS besides losing natural habitat. Cats and dogs kill them, cars and chemicals harm them, and they often crash into windows and glass-covered buildings. But you can help birds fight back! Each problem is an opportunity to help. Check out the rest of the chapter for some ways to save birds.

..... SPARE SOME HAIR?

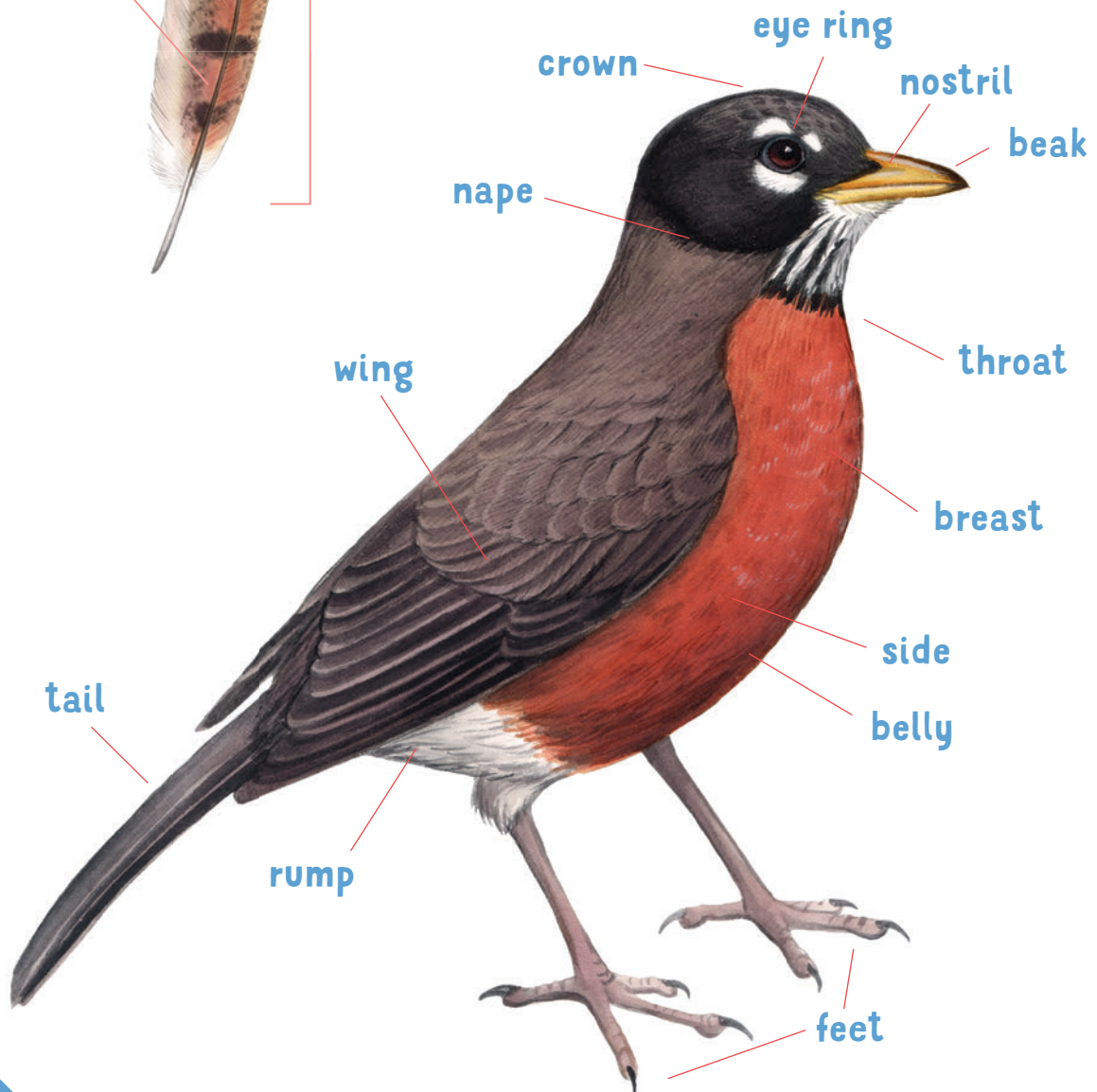
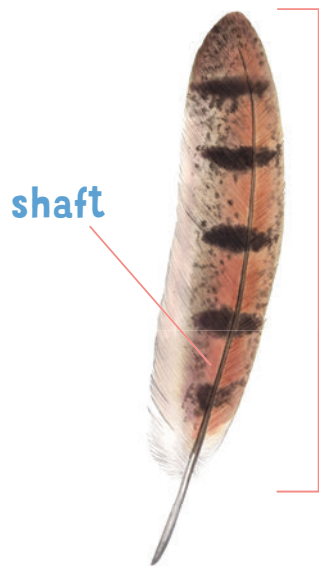


Many birds collect animal hair to line their nests. The next time you brush Spot or Socks, toss the fur outside near some bushes or at the foot of a tree. It may become part of a cozy nest! Note: If your pet's fur has been treated with flea or tick pesticides or other chemicals, it's not safe for birds. Put it in the garbage. Human hair isn't great for nests either. It's so thin that it can hurt birds if it gets wrapped around their legs or necks.



HOUSE
SPARROW

BIO BASICS
PARTS OF A
BIRD





MATERIALS

Ruler

Large plastic
coffee or other
container with lid

Permanent
marker or pen

Pointy-tipped
scissors

Paint (optional)

Nail

String

COFFEE TUB NEST BOX

Many birds nest in holes, or cavities, in trees. Nest boxes are a great way to give cavity nesters more places to lay eggs and raise chicks. The trick is to cut the perfect-sized entry hole for the kind of bird you want to move in. So choose a bird, grab a plastic tub, and measure twice before cutting the hole.

HOW TO



1 Choose a hole size from the chart. Measure and draw the same-sized hole between the center and the edge of the lid (not right in the middle).

2 With adult help, cut out the hole.

3 Paint the nest tub, if you like.

HOLE CHART

FOR THESE BIRDS...

...CUT THIS SIZE HOLE

House Wren, chickadees

1½ inches (2.9 cm)

Titmouse, some warblers,
Red-breasted Nuthatch

1¼ inches (3.2 cm)

Swallows, White-breasted
Nuthatch

1¾ inches (3.5 cm)

Eastern and Western
Bluebird, Carolina Wren

1½ inches (3.8 cm)

Flycatchers,
Mountain Bluebird

1⅞ inches (4 cm)

MEASUREMENTS ARE DIAMETERS.



Want to make a wooden nest box? Look for the web address on page 175.

4 Poke two holes in the side of the tub with a nail. Slip a length of string through the holes and tie it in a loop. Hang the nest box in a protected spot.



MATERIALS

Simple drawing
or downloadable
pattern

Sandwich-size
ziplock bags

Dimensional
fabric paint

ANTI-CRASH WINDOW CLINGS

Every year millions of birds die when they accidentally fly into windows, crashing into the glass. It's a big problem! One way to help is by making window glass easier for birds to see. These fun-to-make window clings can prevent bird crashes.

HOW TO



1 Draw or print a simple picture and slide it into a bag.



2 Apply the paint on the plastic bag, covering your picture. Make sure that all the lines are filled in and connected. Make a thick layer of paint.



For patterns, look for the web address on page 175.

3 Let the paint dry completely. Overnight is best.



4 Carefully peel off the clings and stick them to the inside of your window. The bigger the window, the more clings you can hang.



MATERIALS

Large nail
Disposable water bottle
with lid
Sharpened pencil
Plastic drinking straw
(red or other bright color)
Scissors
Outdoor glue or
waterproof caulk
String or yarn
Red decorations
 $\frac{1}{2}$ cup (120 mL)
extrafine sugar
2 cups (480 mL)
hot water

HOMEMADE HUMMER FEEDER

Hummingbirds need lots of food to fuel their high-energy lives. Make this simple hummingbird feeder and some sugary nectar to help them tank up. Hang the feeder on a low branch or a plant hanger hook and see how many hummers show up.

HOW TO



1 Use the nail to start a hole near the bottom of the water bottle. Make the hole bigger with a sharpened pencil. It should just be big enough to squeeze the drinking straw into it, but no wider.



2 Trim the drinking straw into a 3-inch (7.6 cm) piece. Cut one end of the straw at an angle, as shown.



3 Push the straight end of the straw into the hole. Glue around the hole to hold the straw in place with the angled end up. Let dry.



4 Tie a string around the neck of the bottle for hanging. Decorate your feeder with red stickers, fake flower petals, or markers. Hummingbirds love red!

5 Mix the sugar into the hot water until dissolved. (Don't add food coloring — it isn't good for the hummers.)

To fill the feeder, hold it in the sink with the straw pointing up and the neck of the bottle tilted. Pour in the nectar and screw on the lid before tipping the bottle upright — if you don't, all the nectar will flow out!

HUMMER SWING

Give fun-to-watch
hummingbirds
a place to
perch between
sweet sips.

Twist a pipe
cleaner in
the middle to
make a loop.

Attach the
end to an
unsharpened
pencil or short
stick to make
a swinging
perch.

Hang the
perch near a
hummingbird
feeder.



Tie the
open end
into a knot.

SEEDY SOCK

Finches especially love
tiny black nyjer seeds
(wrongly called thistle
seed sometimes). See if
you can attract them with
this easy-to-make feeder.

Grab an old
sock and fill
it with nyjer
seeds.

Poke a few
small holes
in the sock.



Hang it
up and
watch the
finches
fly in!



MATERIALS

20 x 5-inch
(51 x 13 cm) piece
of lightweight fabric
with a colorful
pattern

Waterproof
fabric glue

Scissors

Reflective tape,
¼ to ½ inch wide
(0.6 to 1.3 cm)

Cat collar
(a breakaway
safety-buckle
version is best)

BIRD ALERT SCRUNCHY

Cuddly cats are great pets. But to birds and other wildlife, your kitty is a predator armed with claws and teeth. This collar cover can help warn birds that danger is on the prowl. The bright colors and reflective strip catch the eye of birds, making it harder for cats to surprise them.

HOW TO



1 Lay the fabric on your work surface wrong side up. Fold down an inch (2.5 cm) or so of one long side of the fabric. Crease it with your fingers.



2 Fold the other long side so that it overlaps the first folded edge by about ½ inch (1.5 cm). Crease the edge. (You may need to iron it.)



3 Open the wider fold and run a line of glue along the edge of the first fold. Press the upper layer of fabric firmly onto the glue to form a tube. Let dry thoroughly.



4 Cut a 19-inch (48 cm) long strip of the reflective tape. Peel off the backing as you stick it on over the glued seam. If it isn't sticking well, use more glue.



5 Slip the collar through the fabric tube, scrunching up the tube and turning the tape to face the outside. It's ready for kitty to wear!



MATERIALS

Water

Microwaveable mixing bowl and spoon

2 packets of unflavored gelatin

2 tablespoons (35 mL) corn syrup, molasses, or honey

2½ cups (600 mL) wild birdseed mix

Several large cookie cutters or molds

Scissors

Plastic drinking straws cut into short pieces

Yarn or string

ORNAMENTS FOR THE BIRDS

Nothing brightens up bare winter branches like a collection of bird-food ornaments. You can smear nut butter on pinecones or toilet paper rolls and coat with wild birdseed or thread oat cereal loops onto pipe cleaners. As an extraspecial treat for your feathered friends, hang up a few of these homemade bird cookies.

HOW TO



1 Pour $\frac{1}{2}$ cup (120 mL) cold water into the bowl. Add both packets of gelatin and stir. Heat $\frac{1}{2}$ cup water in the microwave until boiling. Add it to the mixture and stir until all the gelatin dissolves.



2 Add the sweetener and birdseed. Mix well. Set the bowl in the refrigerator to cool down for about 30 minutes.



3 When the mixture has firmed up, spoon it into the molds or cookie cutters. Press the mixture in firmly.



4 Poke a straw into each mold to create a hole near the center. Let the bird cookies set overnight in the refrigerator.

..... **BIG BIRD FOOD**
 Are squirrels emptying your bird feeders?
 Don't stress about it too much. Squirrels
 are food for hawks and owls, so you're
 still feeding birds!



5 Carefully pop the cookies out of the molds and remove the straws. Thread yarn or string through the holes and tie to make loops. Hang them outside and see who comes to visit.



MATERIALS

Butter knife

1 cup (240 mL) lard

Microwaveable bowl

1 cup (240 mL) crunchy
peanut butter

Mixing spoon

1 cup (240 mL)
old-fashioned oats

1 cup (240 mL) black oil
sunflower seeds

$\frac{2}{3}$ cup (160 mL)
all-purpose flour

$\frac{1}{2}$ cup (120 mL) cornmeal

$\frac{1}{2}$ cup (120 mL) raisins

Loaf pan

Wire suet feeder
or mesh bag

QUICK- AND-EASY SUET CAKES

Winter birds flock to suet feeders. Suet is solid beef or mutton fat; it's a high-energy food that gives birds fuel to stay warm in cold weather. Fill suet feeders yourself with this recipe.

HOW TO



1 Cut the lard into chunks, place into the bowl, and microwave on low until it starts to melt, 1 or 2 minutes. Add the peanut butter and microwave for another 1 to 2 minutes. Stir to combine.



2 Mix in the oats, sunflower seeds, flour, cornmeal, and raisins.



3 Spread the gooey mess into a loaf pan. Place the pan in the freezer for 3 to 4 hours.



4 Once the suet is solid, cut it into feeder-sized squares.



5 Load a wire feeder or mesh bag with the suet and hang it up.



..... A DEAD TREE CAN BE FULL OF LIFE



A dead or dying tree may not look pretty, but it has a place in the ecosystem. If you have one in your yard that isn't a danger, ask your parents to leave it be! Lots of birds depend on dead trees. They're full of tasty insects for woodpeckers. And owls, wood ducks, bluebirds, wrens, and chickadees build cavity nests in dead trees.

If you're wondering where to start with your notebook, here are some suggestions.

- In addition to making notes, make drawings or take photos of birds you see.
- Use the Field Guide pages to help you identify birds. Note how many you see of each species.
- Project updates are important! What's working, what's not?
- Which bird species are using which feeders? Is there a favorite food? Which are using the nest boxes?
- Start a birding "life list," a list of every species you've seen.
- Keep a bird calendar, writing down the dates when different migrating birds show up.

..... BIRD-FRIENDLY GARDEN



Native plants help your habitat by providing food, shelter, and nest sites for birds (and other animals). Trees like cedars, spruces, and oaks offer cover and nesting spaces. Shrubs like sumac, serviceberry, buttonbush, elderberry, and dogwoods as well as vines like Virginia creeper and wild grapes are food factories. Milkweeds, native sunflowers, coneflowers, and cardinal flowers are great for seeds and nectar. Use the native plant websites on pages 174–75 to help you choose what grows best where you live.



RUBY-THROATED
HUMMINGBIRD



You can listen to bird calls on several different websites (see page 174). There are some links to birdsong apps there, too.

WHO'S THAT SINGING?

You often hear birds before you see them. Bird watchers learn to identify birds by both song and sight.



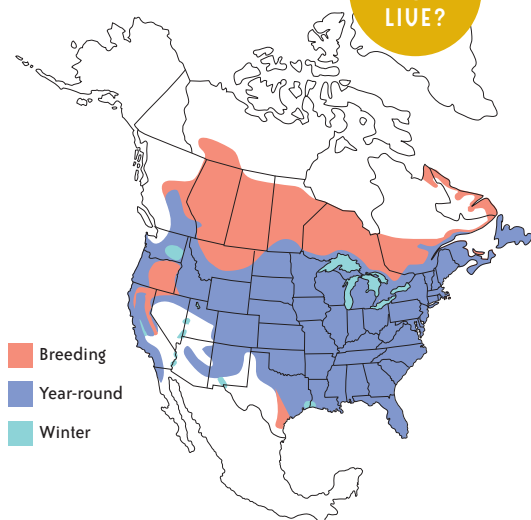
Use a recording device or phone app to record birdsong and calls in your yard.

AMERICAN CROW

.....
Corvus brachyrhynchos

Large, all-black bird in
 treetops or flying in a
 noisy flock

WHERE
DO I
LIVE?



ID ME

SIZE 16 to 21 inches (40 to 53 cm) long

COLOR Black body, eyes, bill, and legs

VOICE Loud caw-caw-caw-caw

LOOK FOR ME

Parks, pastures, farmland, landfills, yards, and along rivers

WHAT I EAT

Seeds, nuts, worms, mice, insects, fish, bird eggs and nestlings, garbage, and carrion (dead animals)

SOME THINGS TO KNOW ABOUT ME

Crows are very social. Young birds stay with parents for years and help raise younger siblings.

Crows often band together to run off predators, like hawks, a behavior called mobbing.

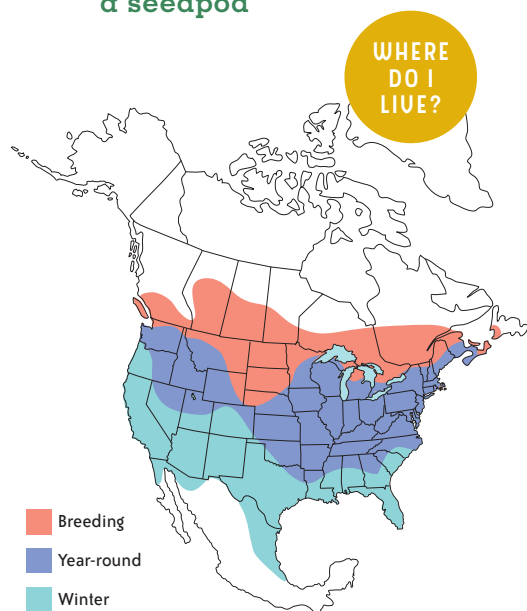
In some places, flocks of crows gather to spend the night in huge roosts, sometimes numbering in the tens of thousands.



AMERICAN GOLDFINCH

.....
Spinus tristis
.....

Little, yellow-and-black bird with a short bill balancing on a seedpod



IDENTIFY ME

SIZE 4½ to 5 inches (11 to 13 cm) long

COLOR Males have bright yellow body in spring and summer. Females are always dull colored as are males during cold months. All have black forehead and wings.

VOICE Squeaky *po-ta-to-chip* call while flying

LOOK FOR ME

Weedy fields, roadsides, backyards, farms, and seed feeders

WHAT I EAT

Seeds from flowers, grasses, trees, and feeders

PLANT THIS FOR ME

Native thistle, milkweed, asters, and sunflowers

SOME THINGS TO KNOW ABOUT ME

American Goldfinches breed later than most native birds. They don't start building nests until there are plenty of seeds to feed young, usually well into June or July.

Goldfinches live in small flocks that fly in an up-and-down wave pattern. They're acrobatic eaters, snacking on seeds while hanging upside down on moving plant stalks.

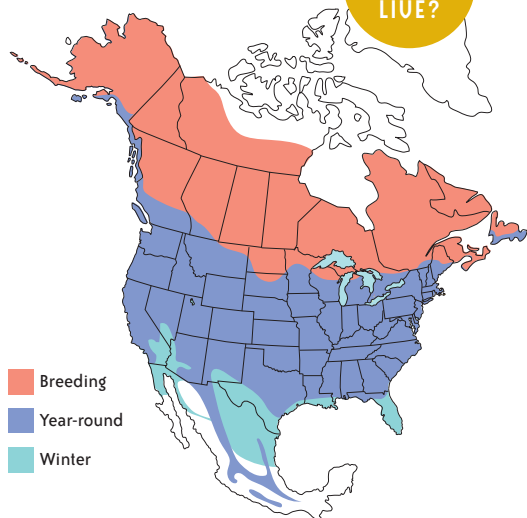
American Goldfinches molt their feathers twice a year, in late winter and late summer. Males switch to bright yellow for spring mating season.

AMERICAN ROBIN

.....
Turdus migratorius

Large, dark songbird with orange chest searching through leaf litter or on lawns

WHERE
DO I
LIVE?



IDENTIFY ME

SIZE 8 to 11 inches (20 to 28 cm) long

COLOR Grayish brown wings and tail, darker head, orange chest, yellow beak

VOICE Musical string of repeating whistles: *cheerily, cheer up, cheer up, cheerily, cheer up*

LOOK FOR ME

Gardens, yards, parks, farm fields, and forests

WHAT I EAT

Worms, insects, and berries

PLANT THIS FOR ME

Berry-making trees and bushes, such as chokeberry, hawthorn, dogwood, sumac, and juniper

SOME THINGS TO KNOW ABOUT ME

American Robins are a kind of thrush. These birds are famous for their musical songs.

When looking for food on the ground, a robin runs then stops suddenly, then runs and stops again.

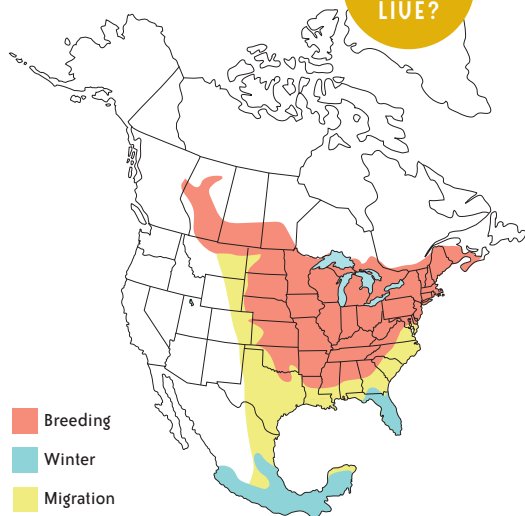
Robins nest in the lower half of small trees or bushes. They will use nest boxes and sometimes even build nests in hanging plants or over doorways. Their eggs are sky blue to blue-green.

BALTIMORE ORIOLE

.....
Icterus galbula
.....

Orange-and-black,
medium-sized songbird with
long legs and a pointy bill

WHERE
DO I
LIVE?



ID ME

SIZE 6½ to 7½ inches (17 to 19 cm) long

COLOR Male has black head and back, bright orange chest, white bars on black wings; female colors slightly duller

VOICE Lovely, flutelike string of notes

LOOK FOR ME

High up in the leafy trees of parks, backyards, edges of forests, and along rivers

WHAT I EAT

Insects, fruit, and nectar

PLANT THIS FOR ME

Fruit trees like crab apple and mulberry; berries like raspberry, blackberry, blueberry, and elderberry; flowers with nectar, such as trumpet creeper vines

SOME THINGS TO KNOW ABOUT ME

Baltimore Orioles are crazy about fruit and come to feeders filled with nectar, jelly, and split oranges.

These acrobats hop between high branches and hang upside down from thin twigs to snag berries or chomp bugs.

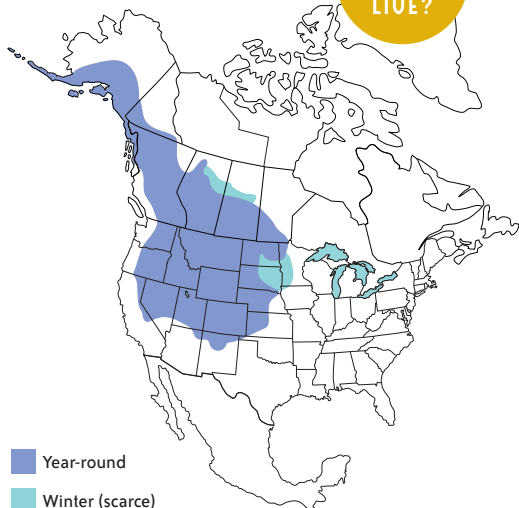
Baltimore Orioles weave soft, sacklike nests of grass and strips of bark that hang from branches like socks on a clothesline.

BLACK-BILLED MAGPIE

.....
Pica hudsonia
.....

Big, noisy, black-and-white bird with a long tail that travels in groups and perches on fence posts

WHERE
DO I
LIVE?



ID ME

SIZE 17½ to 23½ inches (45 to 60 cm) long

COLOR Black head and bill, black-and-white body, iridescent black-blue wings and tail

VOICE Loud raspy *jeeep-jeeep*, *wock-a-wock-a-wock-a*, *jeeep-jeeep*

LOOK FOR ME

Grasslands, parks, yards, farm fields, and pastures

WHAT I EAT

Grasshoppers, beetles, fruit, grain, small prey, and carrion

SOME THINGS TO KNOW ABOUT ME

Magpies come to platform and suet feeders. They're noisy, social, and fun to watch.

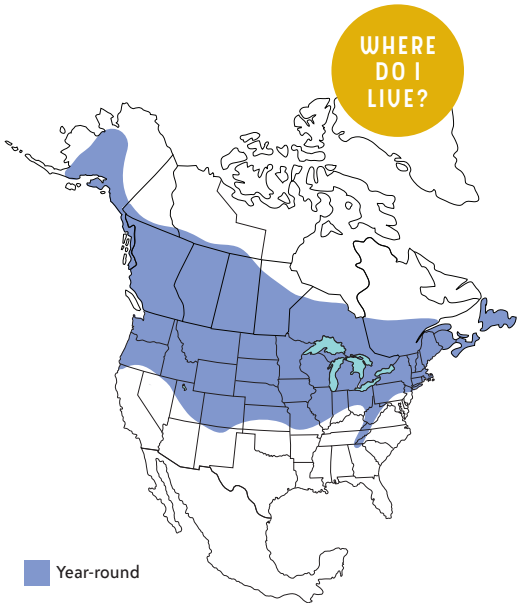
Black-billed Magpies eat ticks off the backs of cattle and flip over dried cow dung looking for beetles.

Nesting pairs build a domed nest of sticks around a mud cup lined with grass.

BLACK-CAPPED CHICKADEE

.....
Poecile atricapillus

Fluffy and friendly, round little bird with a black cap and eyes, and a tiny black bill



ID ME	SIZE 4½ to 6 inches (12 to 15 cm) long
	COLOR Light gray body, black chin and top of head to eyes, white cheeks, light belly
	VOICE Two whistled notes <i>fee-bee</i> , as well as <i>chickadee-dee-dee</i>
	LOOK FOR ME Forests, parks, yards, and gardens
WHAT I EAT	Insects, seeds, and some berries
PLANT THIS FOR ME	Willow, alder, and birch trees grow up to become great nesting sites.

SOME THINGS TO KNOW ABOUT ME

Carolina Chickadees (*Poecile carolinensis*) are nearly identical to their black-capped cousins. If you live south of the middle of Missouri, Indiana, and Ohio, you're probably seeing a Carolina Chickadee. It sings a longer four-note call: *fee-bee-fee-bay*.

Chickadees are cavity nesters and happily use nest boxes, especially with some wood shavings in them. And they love feeders!

Black-capped Chickadees are social, curious, busy, "talkative" birds. Flocks have many different calls with specific meanings. For example, the alarm call to warn of a prowling cat is different than one for a hunting hawk.

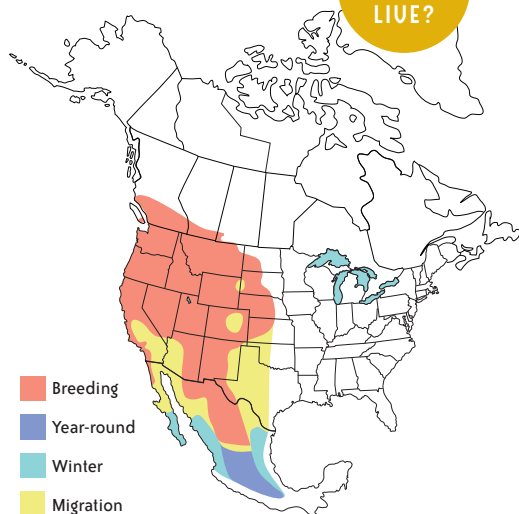
BLACK-HEADED GROSBEAK

Pheucticus melanocephalus

Beefy songbird with thick, cone-shaped bill on a big head; flashes of yellow under the wings in flight



WHERE DO I LIVE?



IDENTIFY ME

SIZE 7 to 7½ inches (18 to 19 cm) long

COLOR Orange-brown body, black head, black-and-white wings. Females are duller in color all over and sometimes have darkish streaks on their sides.

VOICE Rising and falling whistled song

LOOK FOR ME

Mountain forests; desert thickets by streams; yards and gardens with trees

WHAT I EAT

Beetles, spiders, snails, seeds, and fruit

PLANT THIS FOR ME

Fruit trees like crab apple and mulberry, and berry bushes like elderberry and serviceberry

SOME THINGS TO KNOW ABOUT ME

Grosbeaks eat sunflower seeds from feeders, as well as nectar set out for orioles.

Unlike most birds, Black-headed Grosbeaks can eat wintering monarch butterflies even though the insects are full of toxins.

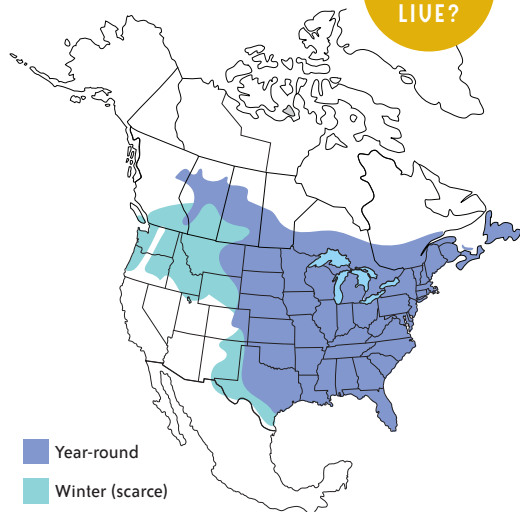
Male grosbeaks court females with loud songs and fancy flying. To attract a mate, a singing male flaps his wings and flies up off his perch, spreading his wings and showing off his tail for 8 to 10 seconds before landing back where he started.

BLUE JAY

.....
Cyanocitta cristata
.....

Large, noisy songbird with black-and-blue wings, a white belly, and a crest of feathers on its head

WHERE
DO I
LIVE?



ID ME

SIZE 10 to 12 inches (25 to 30 cm) long

COLOR Blue back with black, white, and blue markings, gray-white chest and belly

VOICE Loud *jeer-jeer-jeer* as well as whistles; will mimic hawk calls

LOOK FOR ME

Forest edges, yards, and wherever oak trees grow

WHAT I EAT

Acorns, insects, nuts, seeds, fruits, small prey, and carrion

PLANT THIS FOR ME

Oak trees

SOME THINGS TO KNOW ABOUT ME

Blue Jays hold their crests high when being aggressive or feeling threatened. Crests are lowered during mellow family time.

Jays like platform feeders with peanuts, suet, and sunflower seeds. They visit and drink from birdbaths, too.

Blue Jays can learn to mimic cats, hawks, and even human speech sounds.

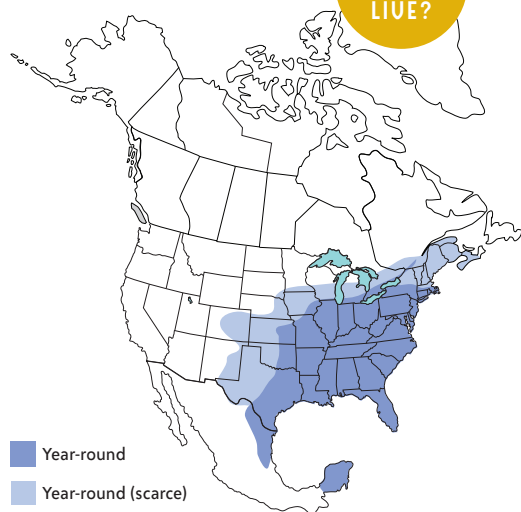


CAROLINA WREN

Thryothorus ludovicianus

Small, hopping, brown bird with upright tail

WHERE DO I LIVE?



IDENTIFY ME

SIZE 4½ to 5½ inches (12 to 14 cm) long

COLOR Reddish brown, tan chest, long white eyebrow stripe, down-curving beak

VOICE Very loud *teakettle-teakettle-teakettle* call

LOOK FOR ME

Woods and areas of thick overgrown thickets, vines, and bushes

WHAT I EAT

Spiders; insects including caterpillars, crickets, beetles; suet from feeders

PLANT THIS FOR ME

Thick bushes and vines, dense trees

SOME THINGS TO KNOW ABOUT ME

These birds are fun to watch. They hop and flit from log to leaf pile and climb tree trunks looking for bugs.

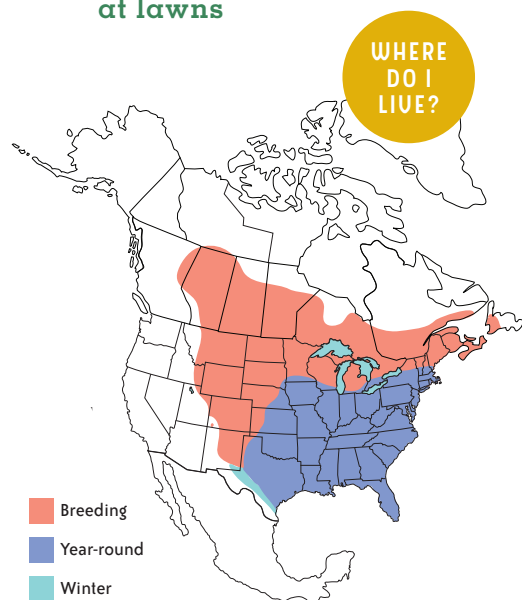
Carolina Wrens are cavity nesters, making nests 3 to 6 feet (1 to 1.8 m) off the ground in tree holes or nest boxes.

Nesting wrens like to get into sheds and other safe spaces. You might find a flower pot or work boot stuffed with leaves and grasses!

COMMON GRACKLE

.....
Quiscalus quiscula
.....

Lean, long-tailed
blackbird with a shiny
body and gold-rimmed
eyes, often seen pecking
at lawns



IDENTIFY ME

SIZE 11 to 13½ inches (28 to 34 cm) long

COLOR Black body; head and neck shiny dark blue. Females are a bit smaller and not as glossy.

VOICE Loud *readle-eak*, *readle-eak* along with squeaks and whistles

LOOK FOR ME

Farm fields, pastures, parks, backyards, marshes, forest edges, and meadows

WHAT I EAT

Seeds from trees, flowers, and grains; some insects; other small prey

SOME THINGS TO KNOW ABOUT ME

Grackles come to feeders with mixed seed and are happy to eat what's spilled on the ground below.

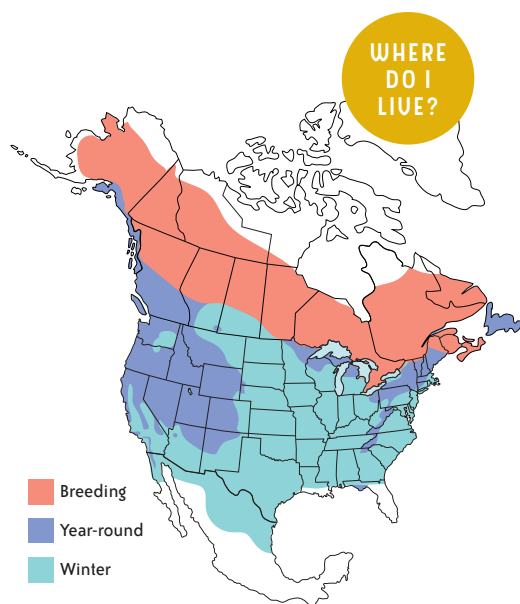
Noisy and social, these birds like hanging out in big chatty flocks with other birds.

When grackles are looking for mates in spring, they playfully chase each other in flight.

DARK-EYED JUNCO

.....
Junco hyemalis

Little, round bird with dark hood snacking on seed in flocks beneath feeders, especially in winter



ID ME

SIZE 5½ to 6 inches (14 to 16 cm) long

COLOR Gray with a dark hood, pale belly, pink bill

VOICE Long, even musical trill

LOOK FOR ME

Fields, parks, gardens, and woodlands during winter and while migrating; forests during summer breeding season

WHAT I EAT

Seeds in winter; some insects in breeding season

PLANT THIS FOR ME

Seed-making native sedges and grasses, native sunflowers

SOME THINGS TO KNOW ABOUT ME

Juncos live all across North America, from Mexico to Canada and Massachusetts to California.

In winter climates, juncos often show up beneath feeders as the cold sets in.

Juncos in western North America are brown with a dark hood and white belly.

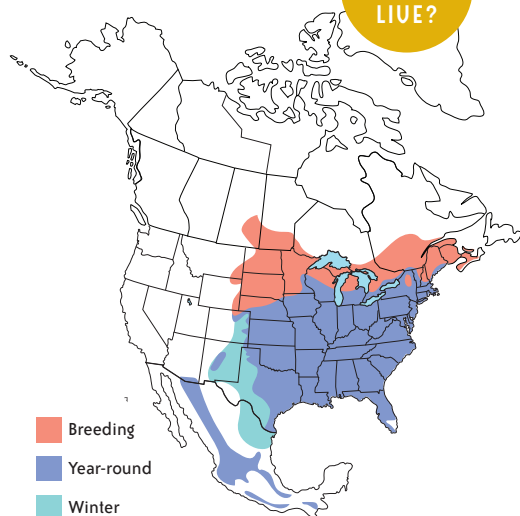
EASTERN BLUEBIRD

.....
Sialia sialis
.....

Small, plump bird with blue back and large eyes hanging out on posts and low branches



WHERE
DO I
LIVE?



IDENTIFY ME

SIZE 6 to 8 inches (16 to 21 cm) long

COLOR Bright blue on top, rusty red chest, buff belly; female coloring is duller

VOICE Soft, low-pitched warble: *tu-a-wee*

LOOK FOR ME

Meadows, grasslands, and other open areas surrounded by trees

WHAT I EAT

Insects such as caterpillars, crickets, and beetles caught on the ground in summer; fruits and berries in winter

PLANT THIS FOR ME

Fruiting plants and trees: mistletoe, sumac, blueberry, black cherry, tupelo, wild holly, dogwood, hackberry, pokeweed, and juniper

SOME THINGS TO KNOW ABOUT ME

Eastern Bluebirds nest in tree cavities and old woodpecker holes.

Bluebirds like smaller nest boxes no bigger than 4 inches (10 cm) wide with holes around 1.8 inches (4.5 cm) across.

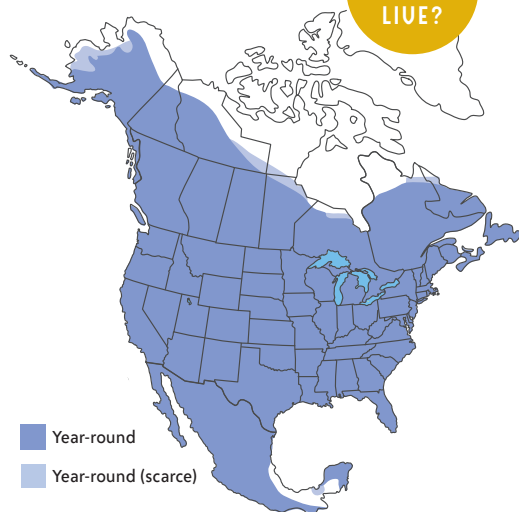
Western Bluebirds (*Sialia mexicana*) have a blue throat. Eastern Bluebirds have a rusty throat. And Mountain Bluebirds (*Sialia currucoides*) are blue all over.

GREAT HORNED OWL

.....
Bubo virginianus

Giant, husky owl with
 earlike tufts and big
 yellow eyes

WHERE
DO I
LIVE?



ID ME

SIZE 18 to 25 inches (46 to 63 cm) long

COLOR Splotchy gray to red-brown with bars and patterns

VOICE Deep, soft, stuttering:
hoo-h'HOO-hoo-hoo

LOOK FOR ME

Woods, swamps, farmland, deserts, and suburbs

WHAT I EAT

Rabbits, woodchucks, bats, skunks, ducks, crows, and prey of all kinds

SOME THINGS TO KNOW ABOUT ME

Great Horned Owls sometimes nest in cavities. More often they take over abandoned stick nests built by other large birds or nest in forked branches.

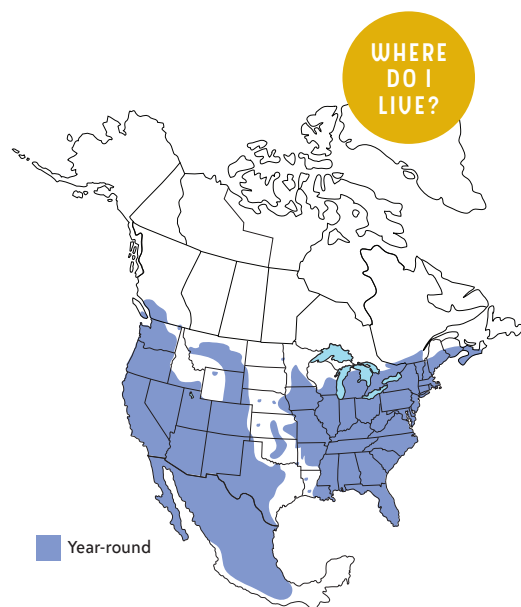
These owls aren't fussy eaters, hunting anything from scorpions to skunks. They are fierce hunters who will tackle prey larger than themselves.

This owl's short, wide wings are perfect for flying through thick forests. Its soft feathers make no noise in flight. Like all owls, it has excellent night vision and keen hearing.

HOUSE FINCH

Haemorhous mexicanus

Small, streaked bird with red coloring around face and upper chest and a thick bill



IDENTIFY ME

SIZE 5 to 5½ inches (13 to 14 cm) long

COLOR Gray-brown with streaks, red on face, head, and chest. Females have the same streaky patterns without the red.

VOICE Long, warbling song of short, twittering notes

LOOK FOR ME

Lawns, parks, farmland, grasslands, deserts, and forests

WHAT I EAT

Seeds, buds, and fruit

PLANT THIS FOR ME

Knotweed; native thistle, sedges, and sunflowers; mulberry

SOME THINGS TO KNOW ABOUT ME

House Finches are native to western North America. But in 1940 a number of caged House Finches were set loose in New York. The birds reproduced and spread across the East.

House Finches travel in little flocks visiting feeders, especially ones with black oil sunflower seeds.

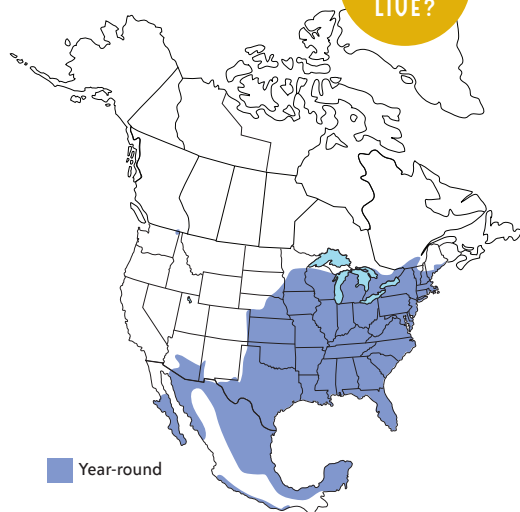
Males will feed females during courtship to show their parenting skills. Like a hungry chick, a female pecks on the male's bill and flaps her wings to ask for food.

NORTHERN CARDINAL

.....
Cardinalis cardinalis

Large, red songbird with thick bill and tall crest of feathers on head

WHERE
DO I
LIVE?



ID ME

SIZE 8 to 9 inches (21 to 23 cm) long

COLOR Males: bright red body, black face, red bill. Females are tawny light brown with reddish tinge on wings, tail, and head; red bill

VOICE Loud string of whistles that end in a trill: *bird-EE, bird-EE, bird-EE*

LOOK FOR ME

Backyards, overgrown fields, and forest edges with high perches

WHAT I EAT

Seeds, fruits and berries, and some insects

PLANT THIS FOR ME

Fruiting plants such as dogwood, mulberry, hackberry, blackberry, sumac, tulip tree, and wild grape; grasses and sedges

SOME THINGS TO KNOW ABOUT ME

Cardinals feed in low branches or on the ground but can be seen and heard singing from the tops of trees or on telephone poles.

Courting pairs build hidden nests in tangles of vines or where two small branches fork.

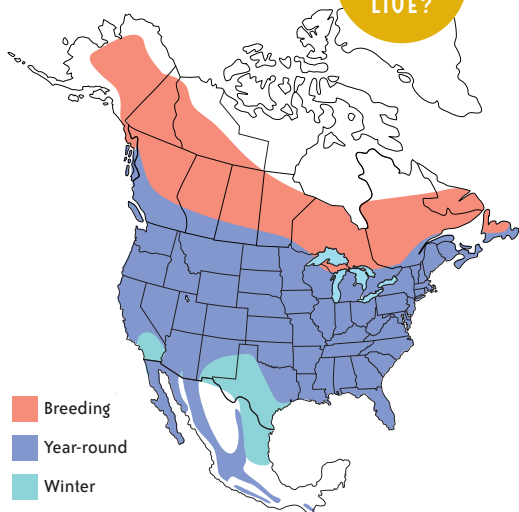
Cardinals come to feeders and especially like sunflower seeds.

NORTHERN FLICKER

.....
Colaptes auratus
.....

Big, grayish brown woodpecker with an easy-to-see white rump patch when flying

WHERE DO I LIVE?



IDENTIFY ME

SIZE 11 to 12 inches (28 to 31 cm) long

COLOR Grayish brown, dark spots on front, dark bars on wings. Feathers on the undersides of the wings and tail are bright yellow in eastern flickers and red in western flickers.

VOICE Loud rolling rattle: ka-ka-ka-ka-ka and rapid drumming on trees

LOOK FOR ME

Parks, yards, woodlands, mountain forests, and trees along open country

WHAT I EAT

Insects like ants and beetles in summer; berries and seeds in winter

PLANT THIS FOR ME

Berry and seed plants like dogwood, sumac, wild cherry, grape, bayberry, hackberry, and elderberry; sunflowers; and native thistle

SOME THINGS TO KNOW ABOUT ME

Like most woodpeckers, flickers fly in an up-and-down pattern of flapping then gliding, flapping then gliding.

Unlike most woodpeckers, Northern Flickers look for food on the ground and will perch on branches instead of clinging to tree trunks.

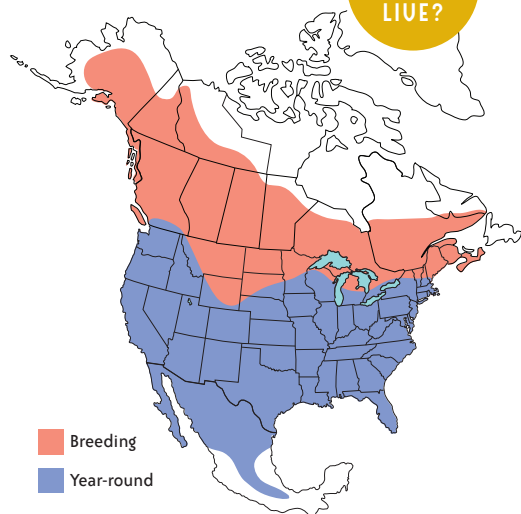
Flickers competing over territory or mates will face off on a branch and use their bills in fencinglike duels. *En garde!*

RED-TAILED HAWK

.....
Buteo jamaicensis

Big hawk sitting on utility poles along roads and highways or circling over fields and open areas

WHERE
DO I
LIVE?



ID ME

SIZE 17½ to 22 inches (45 to 56 cm) long

COLOR Brown on top, cream below, rusty tail

VOICE Loud harsh scream: *kee-eeeeee-arr*

LOOK FOR ME

Deserts, grasslands, fields and pastures, roadsides, and open edges of woodlands

WHAT I EAT

Rabbits, voles, mice, squirrels, and other small mammals; snakes, carrion, and sometimes birds

SOME THINGS TO KNOW ABOUT ME

Red-tailed Hawks are armed with a flesh-tearing, hooked beak and sharp, prey-grabbing claws called talons.

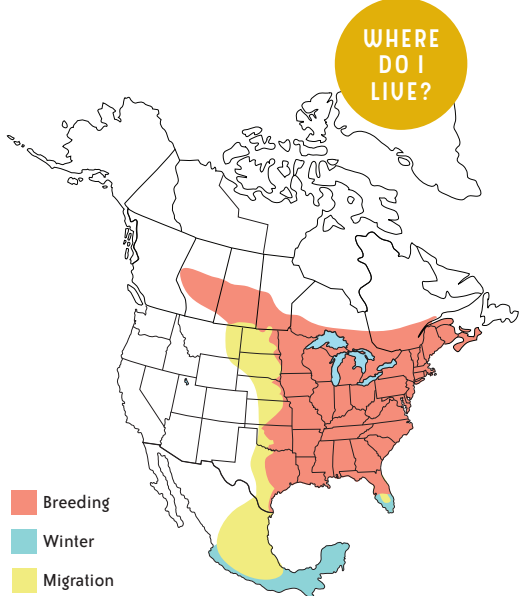
If you see a hawk going after birds at a feeder, it's probably a smaller Cooper's or Sharp-shinned Hawk, not a big Red-tailed.

Red-tailed Hawk pairs build nests of sticks in the tops of tall trees, or on cliff ledges. A nest that is added to over many seasons can grow as tall as a person! They line the inside with strips of bark, leaves, and grasses.

RUBY-THROATED HUMMINGBIRD

.....
Archilochus colubris

Humming sound and flash of bright green



IDENTIFY ME

SIZE 3 to 3½ inches (7 to 9 cm) long

COLOR Shiny green with white chest; males have red throats, females have white throats

VOICE Quick, squeaky *chip* (plus the hum of wings)

LOOK FOR ME

Flower-filled gardens, parks, meadows, edges of woods, and nectar feeders

WHAT I EAT

Flower nectar and small insects like gnats and aphids

PLANT THIS FOR ME

Plants and bushes with red, orange, and tube-shaped flowers: trumpet creeper, bee balm, jewelweed, cardinal flower, bergamot, columbine, fire pink, red buckeye, and phlox

SOME THINGS TO KNOW ABOUT ME

These little birds lay jelly-bean-sized eggs in tiny nests made of lichen, dandelion fuzz, and sticky spider webs.

They migrate hundreds of miles to spend winters in Central America, so they need lots of food for the long journey.

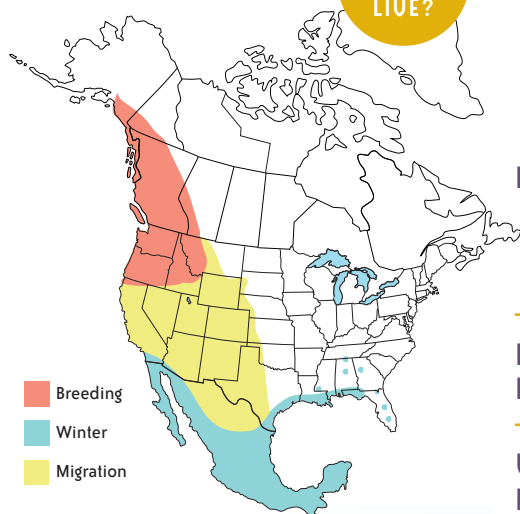
High-energy hummingbirds beat their wings 53 times a second and can hover and fly backward like a helicopter.

RUFIOUS HUMMINGBIRD

.....
Selasphorus rufus

Humming sound and
 flash of shiny orange

WHERE
DO I
LIVE?



ID ME

LOOK
FOR ME

WHAT
I EAT

PLANT
THIS
FOR ME

SOME
THINGS
TO KNOW
ABOUT ME



SIZE 3 to 3½ inches (7 to 9 cm) long

COLOR Males are bright orange with white chest and shiny red throat. Females have greenish backs, cream-colored breasts, and rusty patches on sides, tails, and throat.

VOICE Short *chip* (and hum of wings)

Flower-filled parks and backyards, as well as nectar feeders

Sweet flower nectar and small insects like gnats and aphids

Colorful, tube-shaped flowers like columbine, Indian paintbrush, mint, fireweed, and larkspur

Rufous Hummingbirds are feisty and aggressive. They'll chase away other hummingbirds from feeders.

They are tiny travelers of long distances, some flying from Alaska to Mexico (and back) each year.

Hummingbirds catch small insects out of the air or pluck them off spiderwebs, leaves, or tree bark. Bugs are an important source of protein.



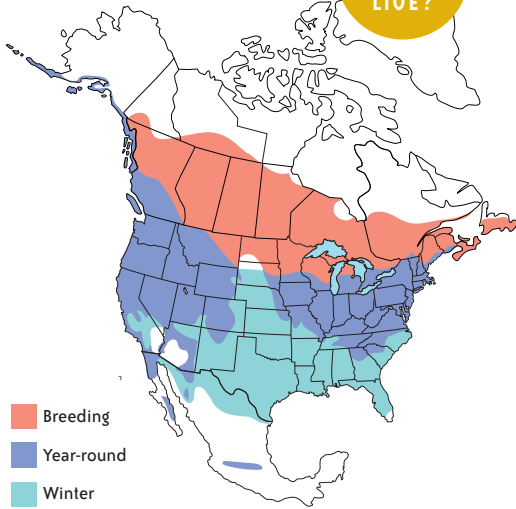
SONG SPARROW

.....
Melospiza melodia

Plump sparrow covered
 in brown streaks proudly
 singing out in the open



WHERE
DO I
LIVE?



IDENTIFY ME

SIZE 4½ to 6½ inches (12 to 17 cm) long

COLOR Streaks of brown to red-brown on white to gray body

VOICE Long, loud, stuttering song that ends with a buzz or trill

LOOK FOR ME

Overgrown fields, yards, and forest and marsh edges

WHAT I EAT

Insects, spiders, snails, and worms, as well as seeds and fruit

PLANT THIS FOR ME

Native clovers, ragweed, sunflowers, and berries

SOME THINGS TO KNOW ABOUT ME

Song Sparrows are common across most of North America but look different depending on where they live. Some are bigger and darker, others are paler and smaller.

Like many songbirds, males sing both to attract a mate and to defend territory. That pretty song is saying, "Get out of here! NOW!"

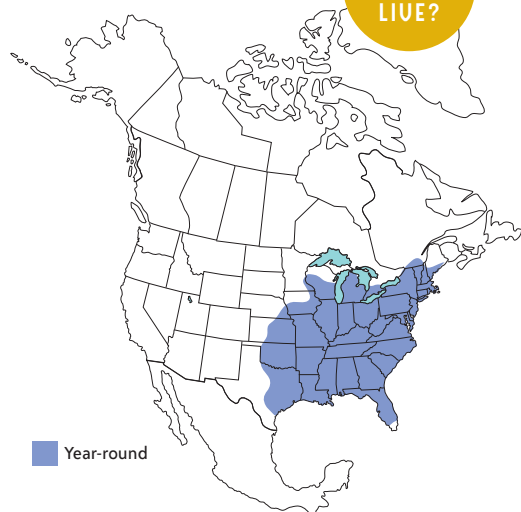
Courting Song Sparrows fly on fluttery wings as a pair with tails up and legs dangling down.

TUFTED TITMOUSE

.....
Baeolophus bicolor
.....

Small, gray bird with pointy crest and big black eyes cracking open seeds on a twiggy perch

WHERE
DO I
LIVE?



ID ME

SIZE 5½ to 6 inches (14 to 16 cm) long

COLOR Shiny gray on top, white below, some rust along the sides, black patch between black eyes, black bill

VOICE Whistled *peter-peter-peter*

LOOK FOR ME

Woods with lots of tall trees, orchards, parks, and yards

WHAT I EAT

Spiders; insects like caterpillars, beetles, and ants; seeds, nuts, and berries

PLANT THIS FOR ME

Nut trees like beech and oak trees for acorns; native sunflowers

SOME THINGS TO KNOW ABOUT ME

Tufted Titmice love to eat sunflower seeds, suet, and peanut butter from feeders.

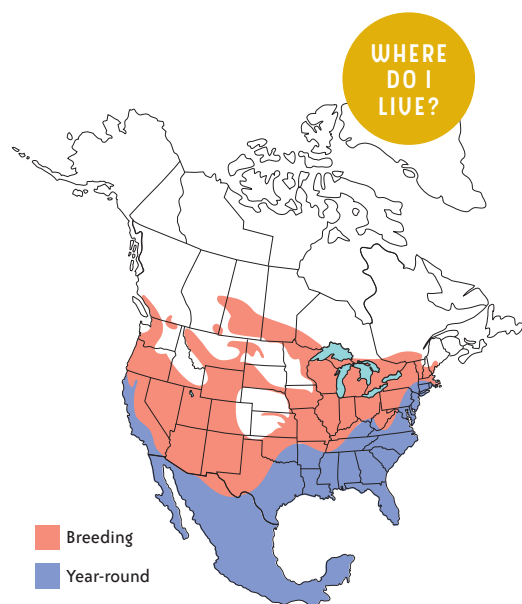
Titmice nest in holes found in dead trees, old woodpecker nest holes, as well as nest boxes. They can't dig out their own nest holes.

The Black-crested Titmouse (*Baeolophus atricristatus*) has a white forehead and jet black crest. It lives in Texas and northeastern Mexico.

TURKEY VULTURE

.....
Cathartes aura
.....

Huge, dark bird soaring
high in the sky with
V-shaped wings that end
in fingerlike feathers



ID ME

SIZE 25 to 32 inches (64 to 81 cm) long

COLOR Dark brown to black, red head, whitish beak

VOICE Hisses

LOOK FOR ME

Farm fields, roadsides, and open country

WHAT I EAT

Carrion (dead animals)

SOME THINGS TO KNOW ABOUT ME

Unlike most birds, vultures have an excellent sense of smell. They use it to track down their dead dinner.

Besides high up in the sky, a good place to spot vultures is along roadsides and highways, especially near roadkill.

Turkey vultures can't sing, but they do hiss to scare away other scavengers.

3

ANTS



ATTRACT

BUTTERFLIES,

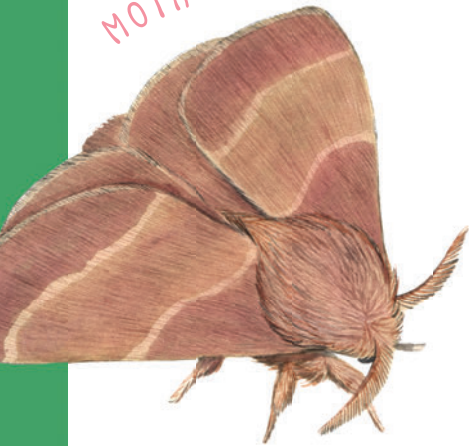
BEEES

& OTHER

BUGGY

BUDDIES

MOTH



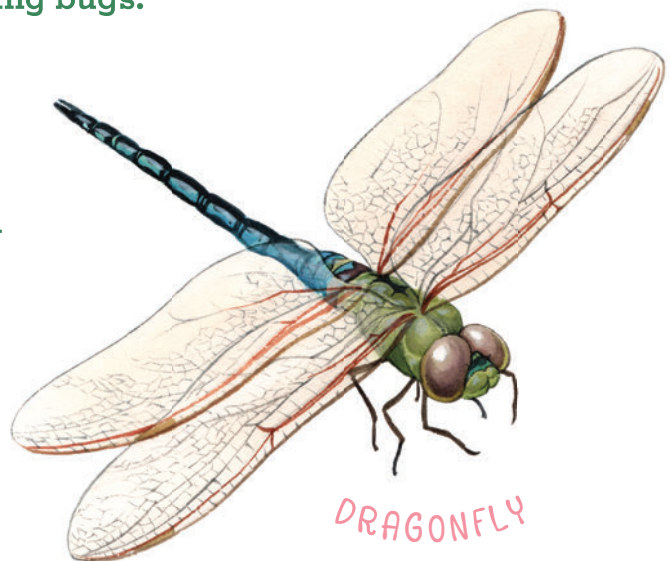
A SPIDER WEAVING A WEB or a cicada leaving its shell are awesome sights. Bugs provide some of the best backyard wildlife watching around. Why? They're easy to find and live almost everywhere. Even a grassy strip between sidewalk and street is home to ants and worms, pill bugs, and beetles.



GARDEN SPIDER

INSECTS, SPIDERS, SLUGS, WORMS, and other small creatures are what backyard habitats are built on. It's true! Insects are important pollinators. Bees and butterflies fertilize plants by transferring grains of pollen between flowers. Without pollination, flowers can't make seeds, nuts, or fruits. The food that wildlife (and people, too!) needs to survive depends on pollen-carrying bugs.

HEALTHY SOIL ALSO COMES from the work of worms, slugs, and insects. They break down dead leaves and transform animal remains into nutrients. And think of all the frogs, birds, shrews, snakes, and other backyard critters that eat bugs and slugs, spiders and insects.



DRAGONFLY



CRICKET

WHAT IS AN INSECT?

AN INSECT IS A SIX-LEGGED ANIMAL that lives as both a larva and an adult — and sometimes another step in between. A good insect habitat has food for each stage of an insect's life. While bumblebee larvae eat pollen, the adults need nectar to sip. Butterfly eggs hatch into larvae called caterpillars. Many caterpillars only eat the leaves of certain plants, called host plants. The host plant for clouded sulphur butterflies is clover, for example.



IT'S NOT HARD
TO HELP OUT
INSECTS AND
BUGS. THEY'RE
ALL AROUND YOU!

INSECTS LAY EGGS in all sorts of places. Dragonflies lay eggs in water. Many bugs stash eggs in soil. Other insects need good shelter and nest sites to build their hives or colonies. Ants, wasps, and bees are famous makers of nests where larvae are fed and raised.



CATERPILLAR

MANY NATIVE BEES ARE IN TROUBLE because of pesticides and loss of habitat. Piles of brush, dead trees, chemical-free lawns, and native plants can make a big difference to their survival.

BIO BASICS

IDENTIFYING SOME
INVERTEBRATES

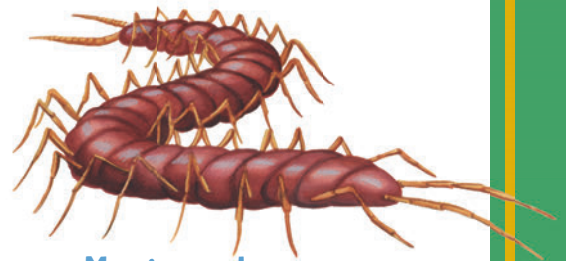


Insects

beetles, flies, butterflies,
moths, dragonflies,
crickets, grasshoppers,
bees, wasps, ants,
and more



Here are some of
the invertebrates
(creatures without a
skeleton) that might
live near you.



Myriapods

centipedes and millipedes



Mollusks

snails and slugs



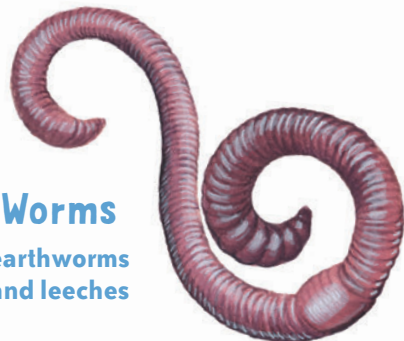
Arachnids

spiders, harvestmen,
ticks, mites



Crustaceans

pillbugs and woodlice



Worms

earthworms
and leeches



MATERIALS

30–40 paper drinking straws or paper, pencil, and tape to make your own

Scissors

Metal soup or bean can, washed and dried

Wood glue

2 or 3 cardboard toilet tissue tubes

Twine or string

BE HOME, BEES

Honeybees are not native to North America. They were one of the many farmed animals brought by European settlers. Most native North American bees are smaller than honeybees and nest in holes and crevices, not hives. This whole-lot-of-holes native bee home is a bee-utiful part of any backyard habitat.

HOW TO



1 If you don't have paper straws, you can make your own. Roll a small sheet of paper around a pencil to make a tube. Tape the edge of the paper and pull out the pencil. Repeat 30 to 40 times!



2 Cut the paper straws or tubes to be about $\frac{1}{2}$ inch (1.3 cm) shorter than the can.



3 Squeeze a thick coating of glue into the bottom of the empty can and spread it around. Push two or three cardboard tubes into the can.



4 Fill the cardboard tubes and the area around them with the paper straws. Push all the pieces down to be sure they are held in place by the glue. Let dry.



5 Tie twine or string about one-third of the way from the bottom of the can, so that the open end will tilt downward to keep out rain. Hang your bee house from a tree branch, fence, or porch railing.

BEE BLOCKS AND BOXES

Know someone handy with a drill? A hole-filled wood block or log makes a great native bee nest.



Want to make a wooden bumblebee box? Look for the web address on page 175.

The holes can be redrilled several times to provide a home for generations of bees.



The holes should be $\frac{1}{8}$ to $\frac{3}{8}$ inch (0.3 to 0.9 cm) wide and at least 5 inches (13 cm) deep.

LEAVE IT BEE

When beetles burrow in dead trees and branches they leave behind tunnels. Wood-nesting bees lay eggs in these tunnels. Leaving dead trees and piles of branches be is good for native bees.

POLLINATOR GARDEN

Butterflies, native bees, and other pollinators are in trouble across North America. You can help by planting a pollinator garden. Native bees need nectar-making flowers and places to nest. Adult butterflies need nectar, too, and their caterpillars eat particular host plants.

Planting different native flowers that bloom in sunny spots throughout the growing season is a big help. So are host plants like milkweeds and clovers. And skip the pesticides!

THISTLE



SUNFLOWER



WILD BERGAMOT



To learn which pollinator plants and butterfly host plants are best for your area, look for the web addresses on pages 174–75.



MATERIALS

Scissors

½-inch (1.3 cm)
thick sponge

Opened paper clip

Empty ketchup,
mustard, or other
squeeze bottle with lid

String or twine

Stickers, indelible
markers, or fake
flowers and glue for
decoration

Small bowl and spoon

Extrafine sugar

Water

Soy sauce

Sand and rocks

Shallow dish,
container, tray, or
saucer

BUTTERFLY CAFÉ

Nothing is nicer than spotting a butterfly sipping nectar or drinking from a puddle. These beautiful insects are important pollinators. So serve them up a snack to help them do their job!

HOW TO



- 1** Cut a piece of sponge about $\frac{1}{2}$ x 3 inches (2 x 7 cm). Use the paper clip to poke the sponge through the hole of the squeeze bottle lid from the bottom. Pull about an inch of sponge through to stick out the top.



- 2** Tie string around the bottle to make a hanger. Decorate the bottle with bright stickers or colorfast fake flowers. The colors red, yellow, orange, pink, and purple bring in butterflies.



- 3** Mix 4 teaspoons (20 mL) of sugar into 1 cup (240 mL) of hot tap water until dissolved. Add 2 or 3 drops of soy sauce. Pour the nectar into the squeeze bottle and screw the lid on tightly.



- 4** Hang the feeder with the sponge tip facing down. Make a drinking puddle by adding a handful of sand and a few rocks to a shallow dish. Set the dish above the ground near the feeder. Note how many different types of butterflies you attract!



HELPFUL PREDATOR PLANTS

Pest-eating insects like mantises, ladybugs, robber flies, and predatory wasps are meat eaters. But many also eat nectar or pollen and all need plants for cover and nesting spaces. Plant these to attract helper bugs: asters, goldenrod,

native sunflowers, cup plant, ironweed, bee balm, coneflowers, golden alexanders, meadowsweet. Use the native plant websites on pages 174–75 to help you choose what grows best where you live.

GOLDENROD



ASTER



BEE BALM



Wondering what else to take note of?

- Keep a butterfly calendar, writing down the dates when different migrators show up, especially monarchs.
- Use the Field Guide pages to figure out which insects and other bugs you're seeing. Keep a list!
- Investigate insect singers. Keep a list of the insect sounds you hear and who might be making them. Use the bug websites on page 174 for help.
- Project updates are important! What's working, what's not? Any ideas for improvements?



..... SHARE THE LOVE

Many butterfly-attracting
plants bring in hummingbirds,
too. Both are nectar lovers!

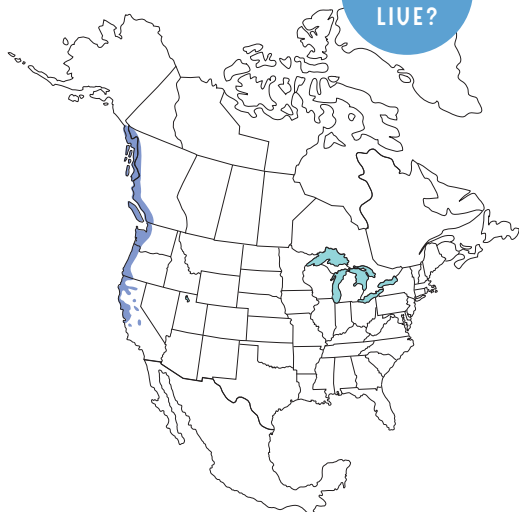


BANANA SLUG

.....
Ariolimax columbianus

Huge slug that looks
 like an overripe banana

WHERE
DO I
LIVE?



ID ME

SIZE up to 10 inches (25 cm) long

COLOR Yellow with brown spots

LOOK FOR ME

Moist forest floors of the Pacific Coast

WHAT I EAT

Leaves, dead plants, fungi, animal droppings

SOME THINGS TO KNOW ABOUT ME

Banana slugs are native to North America. Many common slugs — especially the garden pest kinds — were introduced from Europe.

All slugs have two pairs of tentacles on their heads. One is for sensing light, the other for smell.

Slugs and land snails are decomposers, breaking down dead plants and animals into soil.

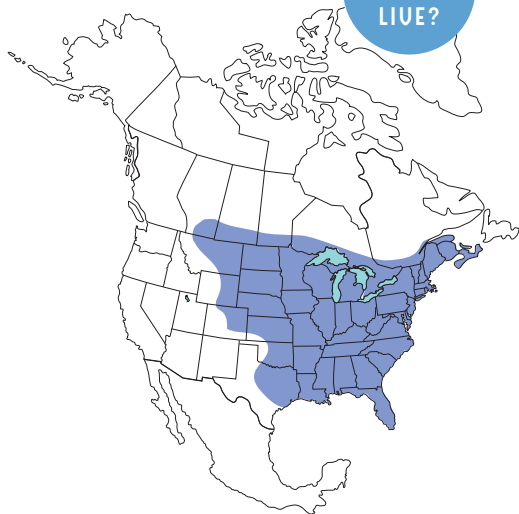
CECROPIA MOTH

.....
Hyalophora cecropia

Large, colorful moth with striped body, patterned wings, and feathery antennae



WHERE
DO I
LIVE?



ID ME

WINGSPAN 4½ to 6 inches
 (11 to 15 cm) wide

COLOR Gray to black wings with red-and-white bands, crescents, and eyespots

LOOK FOR ME

Neighborhoods, forests, parks, and woodlands

WHAT I EAT

Caterpillars eat tree leaves; adults don't eat at all.

PLANT THIS FOR ME

Trees like ash, birch, box elder, elm, maple, poplar, dogwood, and willow

SOME THINGS TO KNOW ABOUT ME

The caterpillars are green with spiky red, yellow, or blue knobs all over their bodies.

Moths are nocturnal, so look for them at night.

This is the largest native moth species in North America.

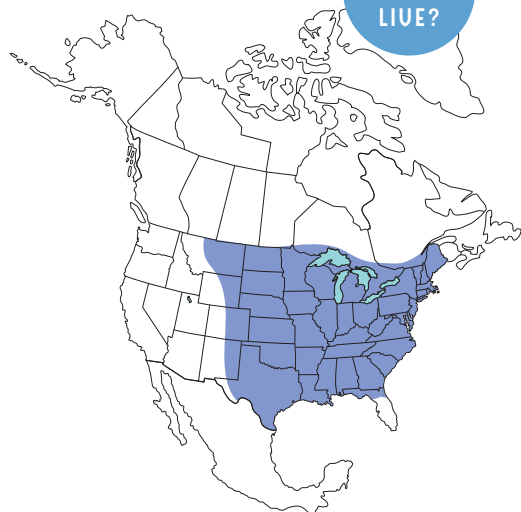


COMMON WALKING STICK

.....
Diaperomera femorata

Slow-moving, long, thin insect that looks exactly like a twig

WHERE DO I LIVE?



ID ME

SIZE 2½ to 4 inches (6 to 10 cm) long

COLOR Green to brown

LOOK FOR ME

Leafy forests

WHAT I EAT

Tree and bush leaves

PLANT THIS FOR ME

Hardwood trees like oak, hickory, wild cherry, and black locust

SOME THINGS TO KNOW ABOUT ME

There are some half-dozen kinds of walking sticks, or stick insects, in North America. Each is perfectly camouflaged in its prairie, forest, or scrubland home.

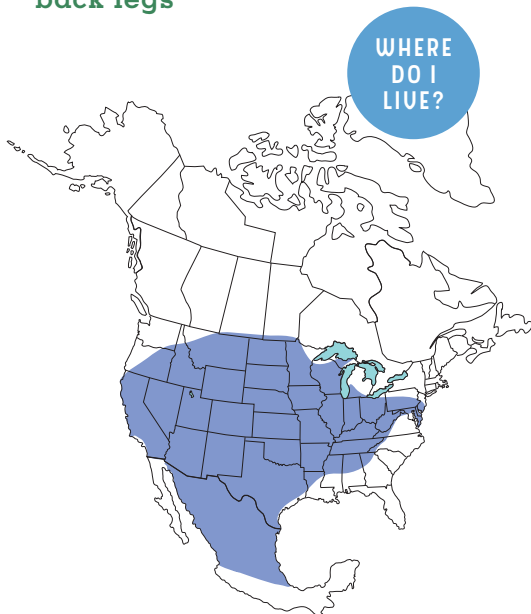
Common walking sticks change color from green to brown to green.

Walking sticks are wingless, but if they lose a leg, they can grow a new one.

DIFFERENTIAL GRASSHOPPER

.....
Melanoplus differentialis

Big, shiny grasshopper with huge eyes and V-shaped markings on back legs



ID ME

SIZE 1 to 2 inches (3 to 5 cm) long

COLOR Light brown with black markings

VOICE Buzz-buzz

LOOK FOR ME

Open woods, fields, and meadows

WHAT I EAT

Plant and grass leaves

SOME THINGS TO KNOW ABOUT ME

Grasshoppers and crickets make noises by rubbing wings together or rubbing a hind leg against a wing.

Differential grasshoppers are great jumpers thanks to powerful hind legs.

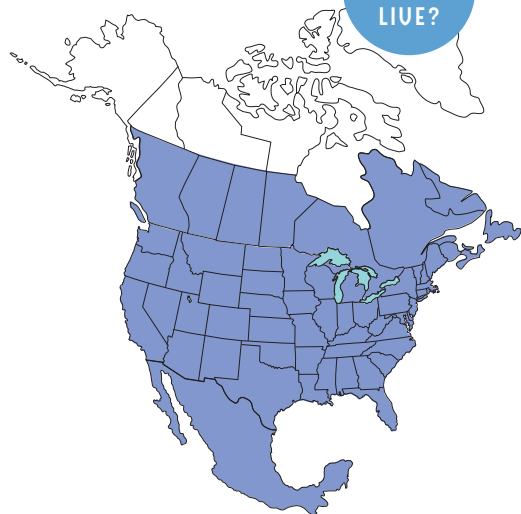
The females lay egg pods in the soil. Each pod has up to eight eggs inside it.

GARDEN SPIDER

.....
Argiope aurantia
.....

Large yellow-and-black spider with long legs on a distinctive web

WHERE
DO I
LIVE?



EGG SACK



ID ME

BODY Females $\frac{3}{4}$ to 1 inch (20 to 28 mm) long; males one-third the size of females.

COLOR Yellow-and-black markings on egg-shaped lower body; black legs with yellow to orange sections. Males are paler.

LOOK FOR ME

Gardens, meadows, parks, and riverside areas

WHAT I EAT

Flying insects

SOME THINGS TO KNOW ABOUT ME

In fall, females weave a silky sheet, lay hundreds of eggs on it, cover the eggs in more silk, and then wrap it up into a ball-shaped egg sack. The spiderlings hatch out and leave the sack in spring.

The garden spider weaves a thick, zigzag ribbon into the web's center.

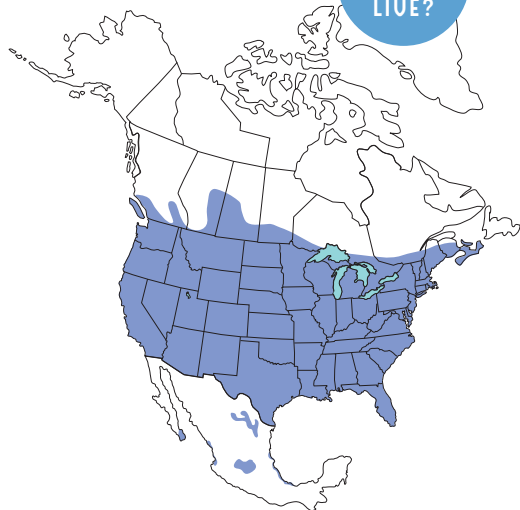
The male hangs out on the edge of the web. The female waits for snagged prey in the web's center.

GREEN DARNER DRAGONFLY

.....
Anax junius
.....

Large, fast-moving dragonfly
with clear wings

WHERE
DO I
LIVE?



IDENTIFY ME

BODY 2½ to 3 inches (7 to 8 cm) long

COLOR Bluish head, green chest with clear wings, and a purplish or blue lower body

LOOK FOR ME

Ponds, streams, and fields

WHAT I EAT

LARVAE water insects, small fish, tadpoles

ADULTS flying insects

SOME THINGS TO KNOW ABOUT ME

This is one of the biggest dragonflies in North America.

Females lay eggs in water, which hatch into larvae that are called nymphs. These young dragonflies are water-living hunters, eating insects, little fish, and even tadpoles. Green darners live as nymphs for a year before changing into adult dragonflies.

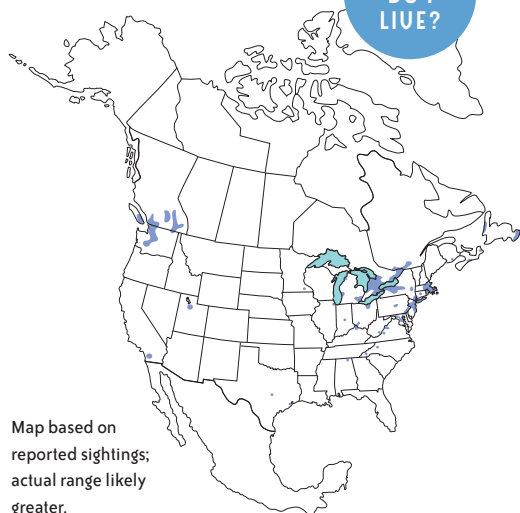
The green darner is one of the few kinds of dragonflies that migrate south for the winter.

GROVE SNAIL

.....
Cepaea nemoralis
.....

A small land snail with
a shiny shell

WHERE
DO I
LIVE?



Map based on
reported sightings;
actual range likely
greater.



ID ME

SHELL about 1 inch (25 mm) wide

COLOR Yellow to brown shell with
dark bands

LOOK FOR ME

Under logs and rocks or in hollow trees in
parks or neighborhoods

WHAT I EAT

Dead plants

SOME THINGS TO KNOW ABOUT ME

Female land snails lay round, rubbery eggs
in damp places.

Land snails and slugs are mollusks. That
makes them related to octopuses, squid,
and clams.

Many common land snails (including this
one) aren't native to North America. They
were introduced from Europe and are
garden pests.

HARVESTMAN

.....
Phalangium opilio

Small, oval body with eight
 extralong, threadlike legs



ID ME

BODY $\frac{1}{10}$ to $\frac{1}{5}$ inch (4 to 6 mm) long

COLOR Red-brown, dark brown legs

LOOK FOR ME

Neighborhoods, woods, forests, mountains, farm fields, meadows, and parks

WHAT I EAT

Rotting leaves and plants; aphids, mites, and other small bugs

SOME THINGS TO KNOW ABOUT ME

Harvestmen like shady places such as leaf piles and wood stacks.

They might have eight legs, but harvestmen are not spiders. They're a different kind of arachnid, the group of eight-legged invertebrates that includes spiders, scorpions, mites, and ticks.

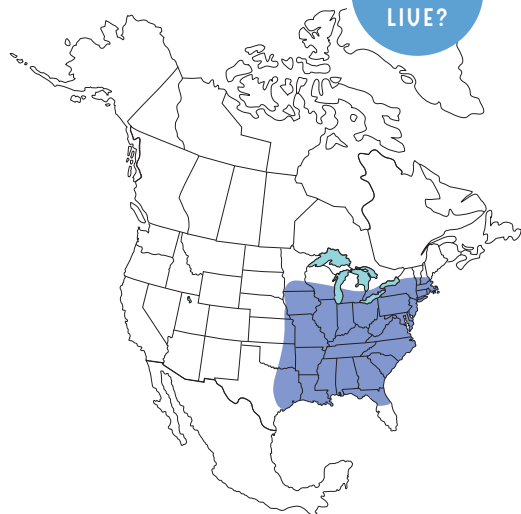
Many people call these common creatures *daddy longlegs*. Do you?

KATYDID

.....
Pterophylla camellifolia

Green, round-bodied
 insect with wings that
 look like leaves

WHERE
DO I
LIVE?



IDENTIFY ME

SIZE 2 inches (5 cm) long

COLOR Bright green

VOICE *katy-DID, katy-DID*

LOOK FOR ME

Forests, woods, and neighborhoods

WHAT I EAT

Leaves of trees

PLANT THIS FOR ME

Leafy trees

SOME THINGS TO KNOW ABOUT ME

Katydid are much easier to hear than see. They live in the crown, or top, of trees. Plus, katydids are perfectly camouflaged and blend in with the leaves.

Fork-tailed bush katydids (*Scudderia furcata*) live across the United States. They have longer, narrower bodies and bigger legs.

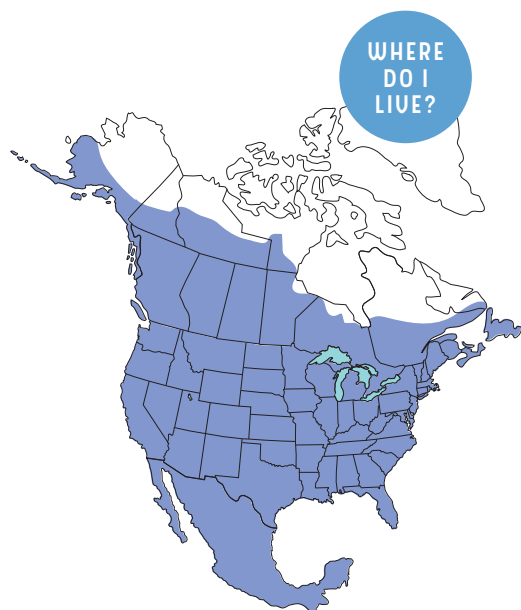
Katydid are relatives of grasshoppers and crickets.



LADY BEETLE

.....
Coccinellidae
.....

Small, oval beetle with black dots on red wing covers



ASIAN LADY BEETLE



ID ME

BODY about 1/5 inch (5 mm) long
COLOR Black spots on red wing covers

LOOK FOR ME

Woods, meadows, gardens, and parks

WHAT I EAT

Aphids, mites, and other small bugs

SOME THINGS TO KNOW ABOUT ME

These small beetles come in many colors and patterns. Some people call them ladybugs or ladybird beetles.

There are more than one hundred kinds of lady beetles in the United States. The similar-looking Asian lady beetle is a different species and is considered invasive.

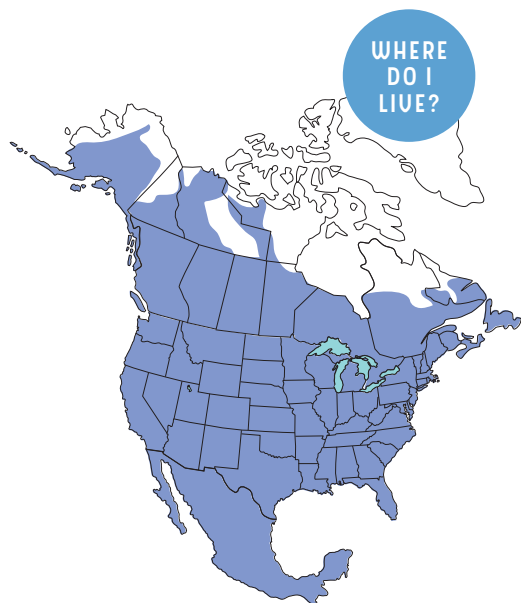
Lady beetles are a gardener's friend. They eat plant pests, like aphids.

Females lay clusters of 15 to 30 bright yellow eggs on plants during spring and summer.

MASON BEE

.....
Osmia spp.

Small, hairy, flylike black
 bee on flowers



ID ME

SIZE about ½ inch (1 cm) long

COLOR Black

LOOK FOR ME

Meadows and open woods, gardens, and parks

WHAT I EAT

LARVAE nectar and pollen

ADULTS pollen

PLANT THIS FOR ME

Nectar-filled flowers like native sunflowers and asters

SOME THINGS TO KNOW ABOUT ME

Mason bees, like many native North American bees, are solitary. They live alone instead of in colonies with workers and a queen.

These native bees are important pollinators. Their hairy fuzz is perfect for trapping and transporting pollen between flowers.

Mason bees use mud to build nests in small crevices and corners. You can help by giving them places to nest (see pages 72–73).

MONARCH BUTTERFLY

.....
Danaus plexippus
.....

Large butterfly with deep-orange wings that have black veins and black borders with white dots



IDENTIFY ME

WINGSPAN 3 to 4 inches (8 to 10 cm) wide

COLOR Orange and black

LOOK FOR ME

Fields, gardens, and roadsides

WHAT I EAT

CATERPILLARS milkweed leaves

ADULTS nectar from flowers

PLANT THIS FOR ME

Milkweed, nectar-filled flowers like native sunflowers and asters

SOME THINGS TO KNOW ABOUT ME

Like all butterflies, monarchs hatch out as caterpillar larvae. They eat and grow, eventually attaching themselves to a stem and transforming into a chrysalis. Weeks later, an adult butterfly breaks out of the cocoon.

Monarch caterpillars feed on the gluey, sap-filled leaves of milkweed, soaking up its toxic chemicals. Most birds won't eat bad-tasting monarchs.

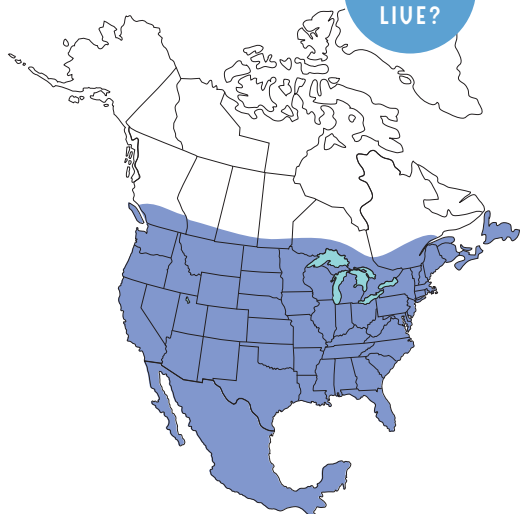
Every fall, monarchs living east of the Rocky Mountains migrate to Mexico for the winter. In spring, they head back north, laying eggs along the way then dying at the end of the season. Somehow their offspring know how to find their way to Mexico to repeat the cycle.

PAPER WASP

.....
Polistes spp.

Slender wasp with
 long wings on a
 paper nest

WHERE
 DO I
 LIVE?



ID ME

BODY ½ to 1 inch (10 to 25 mm) long

COLOR Red-brown body with yellow and black markings

SOUND Buzzzzzz from wings

LOOK FOR ME

Buildings, gardens, parks, and open woods

WHAT I EAT

Nectar, sap, fruit juices; insects to feed larvae

SOME THINGS TO KNOW ABOUT ME

There are about two dozen kinds of paper wasps (*Polistes*) in the United States and Canada. Most can deliver a painful sting, so don't touch!

Wasps make paper by chewing up plant stems and wood and mixing it with spit. They use the paper to build a nest of six-sided open cells.

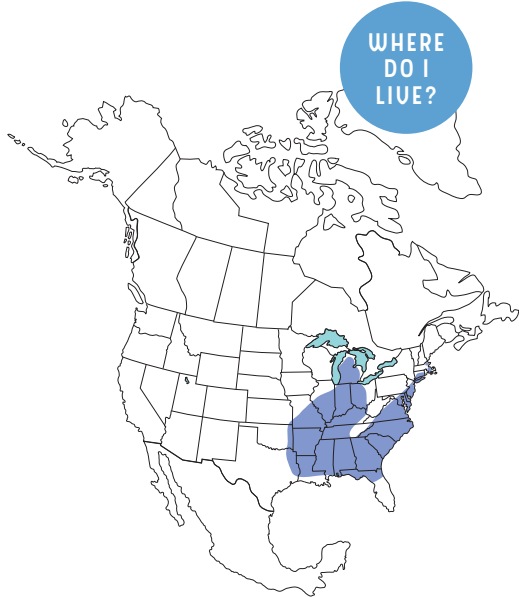
The queen lays eggs in the paper cells. Once the eggs hatch, workers feed the larvae chewed-up insects.



PERIODICAL CICADA

.....
Magicicada spp.
.....

Loud, large, black flying insect
with big, round, red eyes



ID ME

SIZE 1 to 1½ inches (2.5 to 3.8 cm) long
COLOR Black body, clear wings with orangish veins, red eyes
VOICE Loud drone: *weeee-whoa, weeee-whoa*

LOOK FOR ME

Suburbs, parks, and forests with leafy trees

WHAT I EAT

Sap from underground roots, tree sap

PLANT THIS FOR ME

Leafy trees like oaks

SOME THINGS TO KNOW ABOUT ME

Cicada larvae hatch out of eggs laid in slits cut into tree stems by adult females. The nymphs climb trees when they're ready to become adults. The winged adults leave behind their shells on tree bark and fence posts.

Periodical cicadas stay underground for 13 to 17 years (depending on the species). At the same time, they change into adults in huge broods. Then the thousands of males all sing together to attract mates. It makes for a noisy summer!

There are also annual cicadas that hatch out in just 1 year. They don't have red eyes.



ANNUAL CICADA

PILL BUG

.....
Armadillidium vulgare

Tiny, oval bug with
 14 legs and armorlike
 plates



ID ME

SIZE ½ to 1 inch (1 to 2 cm) long

COLOR Gray to black

LOOK FOR ME

Damp, dark places like underneath logs, rocks, or leaves

WHAT I EAT

Decaying plants and animals

SOME THINGS TO KNOW ABOUT ME

Whether you call them pill bugs, sow bugs, or roly-polies, these creatures aren't insects at all. They're crustaceans and related to lobsters, crayfish, and shrimp.

Pill bugs roll themselves up into a ball to defend themselves.

Pill bugs and their crustacean cousin the wood louse (*Porcellio scaber*) arrived with European settlers and their imported crops and livestock.

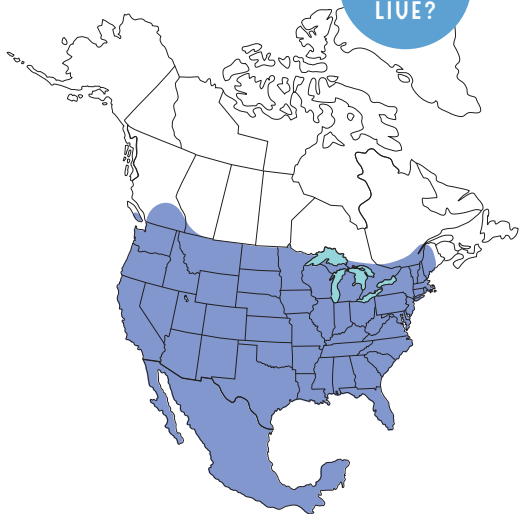
PRAYING MANTIS

.....
Mantis religiosa
.....

Large, slender insect with folded “praying” front legs and a triangle-shaped head



WHERE
DO I
LIVE?



ID ME

SIZE 2 to 2½ inches (5 to 6 cm) long

COLOR Green to light brown

LOOK
FOR ME

Fields, gardens, roadsides, and parks

WHAT
I EAT

Insects and spiders

SOME
THINGS
TO KNOW
ABOUT ME

Mantids are the only insects whose necks turn far enough to let them look over their own shoulders, which comes in handy for hunting.

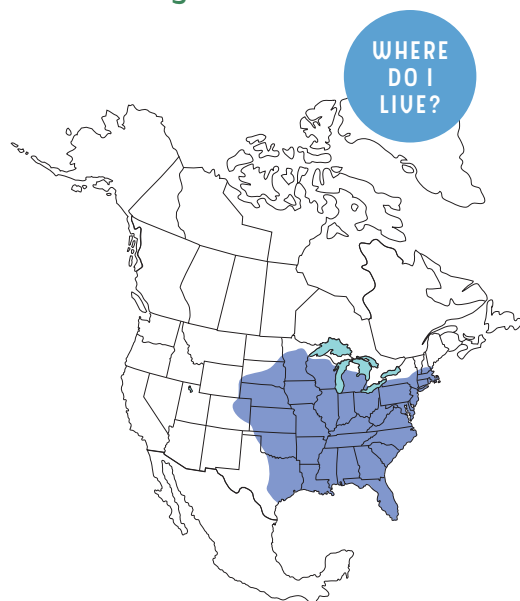
All mantids are “preying” mantids! They are ambush hunters that wait for prey to get close enough to catch.

Gardeners use mantids to control plant pests. Mantids imported from Europe and Asia are now common all across North America. Carolina mantids (*Stagmomantis carolina*) are native to the southern half of the United States.

TIGER SWALLOWTAIL

.....
Papilio glaucus

Large, yellow-and-black butterfly with tail-like extensions on its back wings



ID ME

WINGSPAN 3½ to 6 inches
(9 to 16 cm) wide

COLOR Yellow wings with black stripes and shiny blue hindwing splatches

LOOK FOR ME

Forests, meadows, parks, gardens, and roadsides

WHAT I EAT

CATERPILLARS tree leaves

ADULTS nectar

PLANT THIS FOR ME

Poplar and black cherry trees for caterpillars, nectar-filled flowers like native sunflowers for adults

SOME THINGS TO KNOW ABOUT ME

A tiger swallowtail caterpillar is dark green with two large, eye-shaped spots on a swollen area of its back behind the head.

Swallowtail butterflies have “tails” on their back wings that look a bit like the forked, pointy tails on birds called swallows.

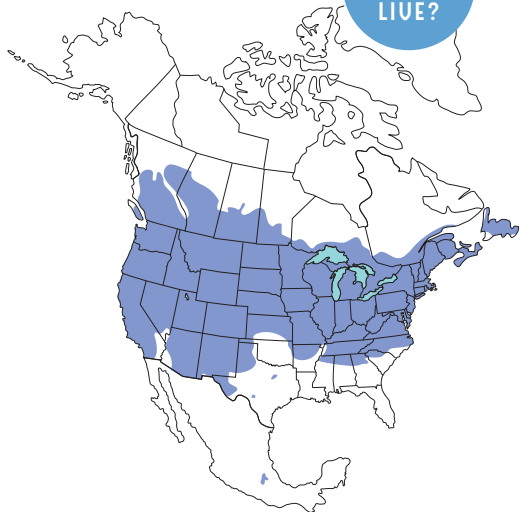
Tiger swallowtail butterflies are high fliers, cruising above treetops more than 160 feet (50 m) above the ground.

YELLOW BUMBLEBEE

.....
Bombus fervidus

Large, fuzzy, black-and-yellow bee with dark wings, seen buzzing around flowers

WHERE
DO I
LIVE?



ID ME

BODY about ½ inch (13 mm) long

COLOR Black head, yellow body with black bands, dark brown wings

SOUND Buzzzzzz from wings

LOOK FOR ME

Gardens, meadows, parks, roadsides, and open woods

WHAT I EAT

Nectar from flowers

PLANT THIS FOR ME

Flowers like black-eyed Susans, native sunflowers, milkweed, goldenrod, jewelweed, asters

SOME THINGS TO KNOW ABOUT ME

Yellow bumblebees live in colonies of 50 to 125 workers and one slightly larger queen. Watch with caution! Bumblebees sting.

The similar-looking American bumblebee (*Bombus pensylvanicus*) lives farther south, but not as far west.

There are more than 40 kinds of bumblebees in North America. Many of their populations are declining because of habitat loss and pesticides. They are important pollinators.



PAINTED TURTLE

4

BRING IN
TURTLES,
LIZARDS

& OTHER
SCALY PALS

GREEN ANOLE



SEEING A SNAKE slither by or spotting a turtle is a real treat. Reptiles are some of the coolest wildlife around. And not just because they're cold-blooded! Turtles, lizards, snakes, and other reptiles are ancient animals. They've been adapting to life on Earth for hundreds of millions of years. And these dinosaur relatives might be living right in your backyard.

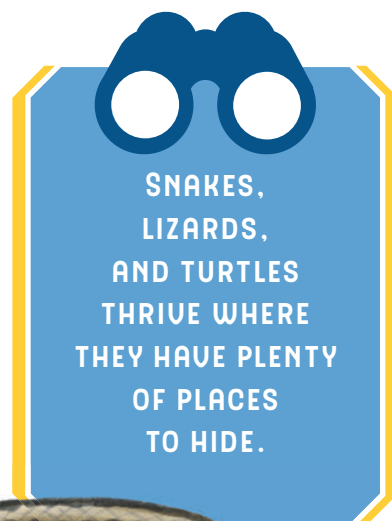


BOX TURTLE

REPTILES ARE MORE COMMON where winters are mild. Lizards don't live in Alaska, for example. But reptiles do thrive in dry regions. Protective scales cover their skin, and reptile eggs have shells that seal in moisture.

AS COLD-BLOODED CREATURES, reptiles soak up heat by sunbathing. If it gets too hot, they simply head for shade or into a cool burrow. Not having to keep their body at a steady temperature saves energy.

REPTILES NEED LESS FOOD than many birds or mammals. They can go days between meals, which helps them survive in harsh places like deserts. Most reptiles are carnivores who hunt prey.



GARTER SNAKE

WHAT'S THE DIFFERENCE?

LIZARD VS. SALAMANDER

Lizards and salamanders are four-legged, cold-blooded critters with tails. While they are often similar in size, lizards are reptiles and salamanders are amphibians (see chapter 5). Here's how to tell them apart.

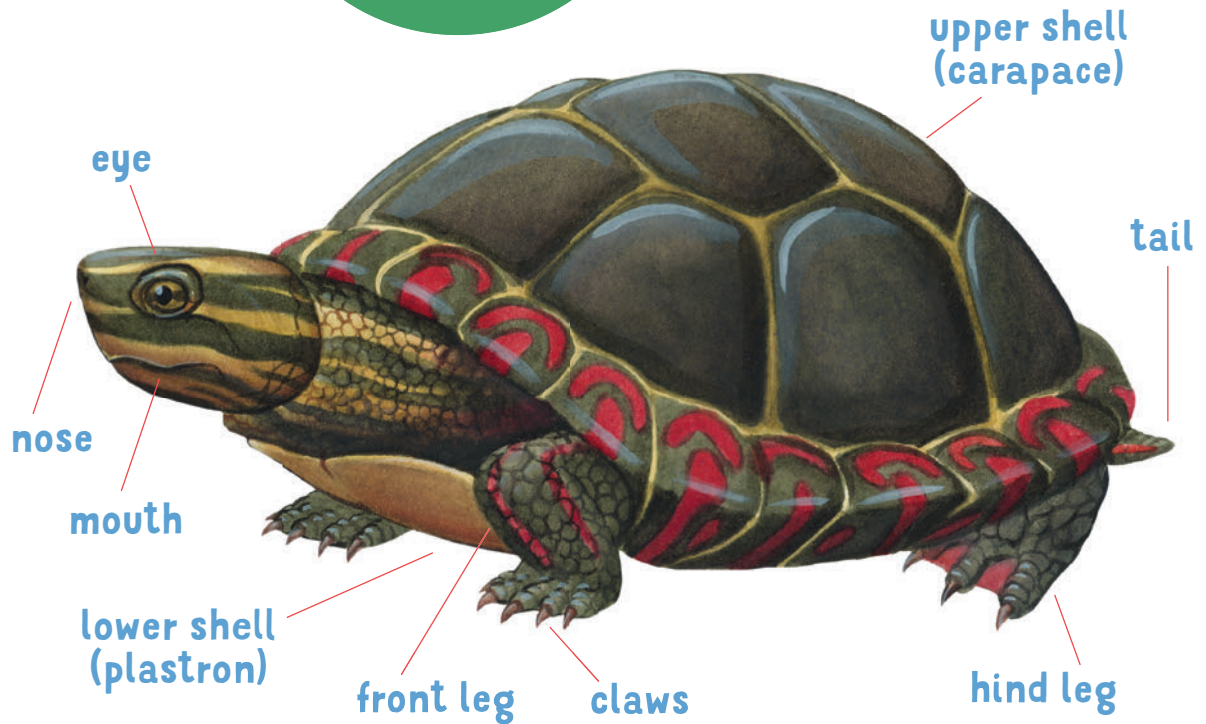


Little lizards snack on ants, while big snakes hunt bunnies. Many snakes and lizards get enough water from what they eat.

GOOD REPTILE REFUGES include stone walls, patches of plants, and fallen logs. A heap of rocks is great for sunbathing, and lizards lay eggs in the cracks and crevices. Brush piles provide cover for snakes to hunt and hibernate. Turtles lay eggs in patches of loose sandy soil.

GO NATURAL where you can in the yard. You may be rewarded by the sight of a box turtle munching on a wild strawberry or a garter snake sliding across your path!

BIO BASICS
PARTS OF A
TURTLE





MATERIALS

Floor or wall tiles
Spacers such as
broken tiles, flat
rocks, canning jar lids,
tuna cans, etc.
Ruler
Outdoor glue or
waterproof caulk
Wooden board
(optional)

LIZARD LODGE

Lizards like sunny spots with lots of crevices. Piles of rock or wood work well, but not every backyard has them. Give lizards a place to lounge by building a multistory lodge from leftover floor or wall tiles.

HOW TO



1 There's no set design — just stack up tiles and spacers until you have a lodge you like. The biggest tile makes a good base. If you don't have one big tile, glue together four to six smaller tiles onto a board. Here are some more tips:

- Use spacers to create lizard-friendly heights between levels. Levels can vary and don't have to be perfectly even. They'll be glued.
- Use wide spacers to separate some of the levels into rooms. Lizards like personal space.
- Use the rougher side of the tiles as floors and the slicker side as ceilings.



2 When you have a design you like, glue it together. Starting with the base, put glue on the bottom of the spacers and set them in place on the first layer. Put more glue on top and add the next layer. Keep gluing and stacking until all the pieces are in place.



3 Let the glue dry completely. Place the lizard lodge someplace out of the wind. Choose a spot that gets morning sun, if possible.



MATERIALS

Shovel or trowel

Plastic, metal,
or terra-cotta
shallow container
(such as a planter
saucer, pie tin, or
flying disc)

Water

TURTLE SPA

Box turtles are land-loving turtles. They live incredibly long lives, up to a hundred years! In hot weather, box turtles seek out mud to cool off. Make a refreshing mud spa and see if a box turtle comes to visit.

HOW TO



- 1 Find a low spot in your yard where water collects when it rains. Dig it out a bit so it stays wet longer.

BOX TURTLE GARDEN



Most reptiles are meat eaters, but box turtles are omnivores who eat a lot of fruit. Here are some native fruits to plant if you can: mayapple, wild black cherry, summer grape, pokeweed, huckleberry, elderberry, native mulberry, blackberry, American persimmon, and crab apple. Use the native plant websites on pages 174–75 to help you choose what grows best where you live.



- 2 Press the shallow container into the dug-out spot. Add a few handfuls of dirt.

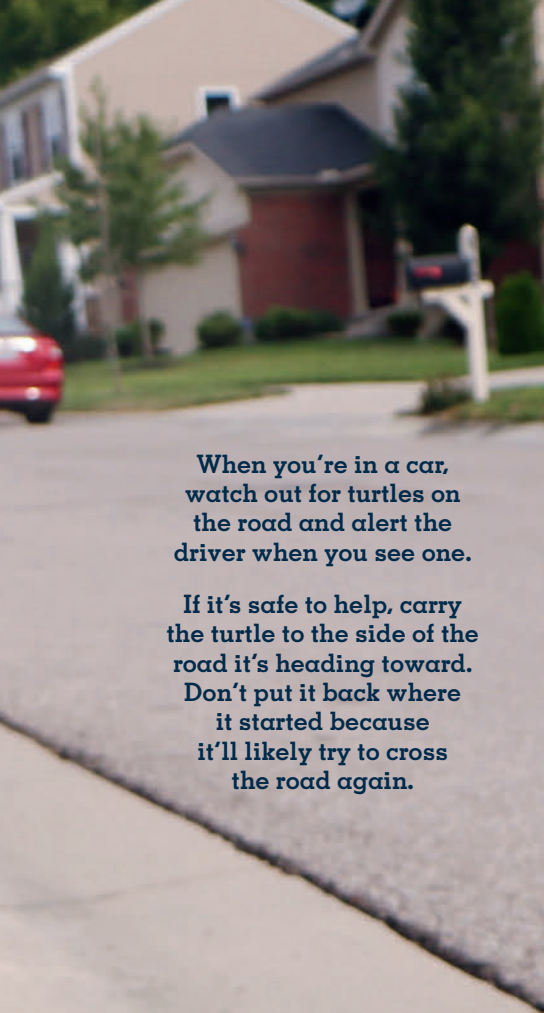


- 3 Pour in some water to stir up a luxurious mud bath. Check the water level often to keep the spa moist and inviting.



TURTLE PATROL

Many turtles are hit by cars. If you've noticed a spot where turtles cross the road in your neighborhood, post a Watch Out for Turtles sign.



When you're in a car, watch out for turtles on the road and alert the driver when you see one.

If it's safe to help, carry the turtle to the side of the road it's heading toward. Don't put it back where it started because it'll likely try to cross the road again.



DON'T PICK UP AFTER YOURSELF!

A messy yard with patches of tall grass and stacked-up brush is great for snakes. Rock piles and left-to-rot logs make good lizard hangouts. Box turtles love leaf litter and patches of bare dirt.



WILD NOTES REPTILES



Wondering what else to take note of?

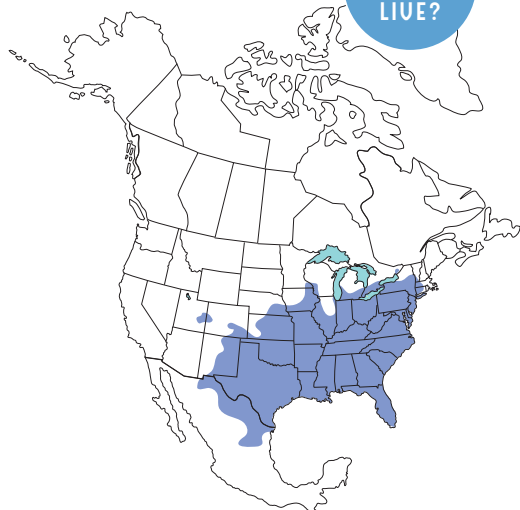
- Use the Field Guide pages to figure out the snakes, lizards, and turtles you've seen. Keep track of when and where and note what they were doing.
- Draw or photograph the shell patterns of turtles you see. Each is unique, like a fingerprint.
- Make a map of your backyard, noting where reptiles can find cover and habitat.
- Project updates are important! What's working, what's not? Any ideas for improvements?

BLACK RAT SNAKE

.....
Pantherophis obsoletus

Large, long snake with
 squarish, boxy shape
 because of its flat (not round)
 belly and straight sides

WHERE
DO I
LIVE?



ID ME

SIZE 3 to 7 feet (1 to 2 m) long

COLOR Black, or black with yellowish stripes, or yellow-gray with stripes on top; throat and belly are light-colored

LOOK FOR ME

Farmlands, leafy forests, swamps, and rocky hillsides

WHAT I EAT

Mice, rats, voles, rabbits, birds, eggs, and lizards

SOME THINGS TO KNOW ABOUT ME

Rat snakes are usually black in the North, but southern rat snakes are yellowish and can have stripes.

Rat snakes are one of the largest and longest snakes in North America. They're terrific at climbing and easily shimmy up trees and barn poles.

When picked up by a predator (or person), a rat snake will squirt out a nasty-smelling, musky liquid and smear it around with its tail.

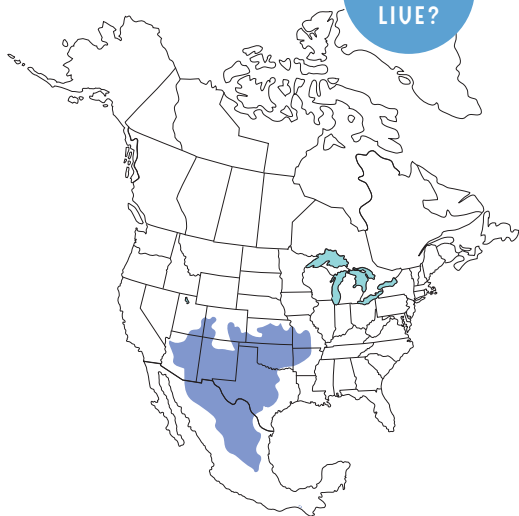


COLLARED LIZARD

.....
Crotaphytus collaris
.....

Big-headed lizard with a long tail and two black, collarlike stripes across the back of the neck

WHERE
DO I
LIVE?



IDENTIFY ME

SIZE 8 to 14 inches (20 to 36 cm) long

COLOR Greenish yellow to brown body with light spots; black stripes at back of neck

LOOK FOR ME

Stone ledges and cliffs, rocky hillsides, shrubby canyons, arid woodlands, and dry riverbeds

WHAT I EAT

Insects, spiders, small snakes or lizards

SOME THINGS TO KNOW ABOUT ME

Collared lizards can run on their hind legs like a mini T-rex. And they bite!

These lizards like to hide under boulders and sunbathe on them, too.

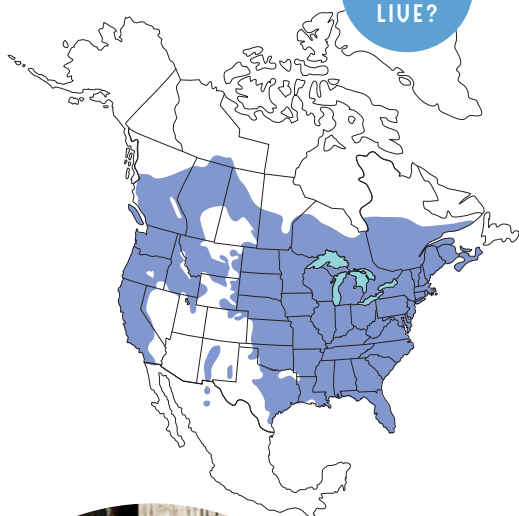
The color of these western lizards varies a lot. Females are paler but get red or orange spots when carrying eggs. Males are brighter and have bands of color on their backs.

COMMON GARTER SNAKE

.....
Thamnophis sirtalis
.....

Medium-sized snake
with three stripes
down its back

WHERE
DO I
LIVE?



IDENTIFY ME

SIZE 1½ to 3 feet (45 to 91 cm) long

COLOR Varies a lot! From nearly all black to light-colored with stripes and red checkering

LOOK FOR ME

Neighborhoods, parks, farms, gardens, grasslands, moist woods, and marshes

WHAT I EAT

Worms, frogs, salamanders, and mice

SOME THINGS TO KNOW ABOUT ME

Unlike many snakes, garter snakes don't lay eggs. They give birth to live young.

The most common snake across the United States and Canada, it's a daytime hunter.

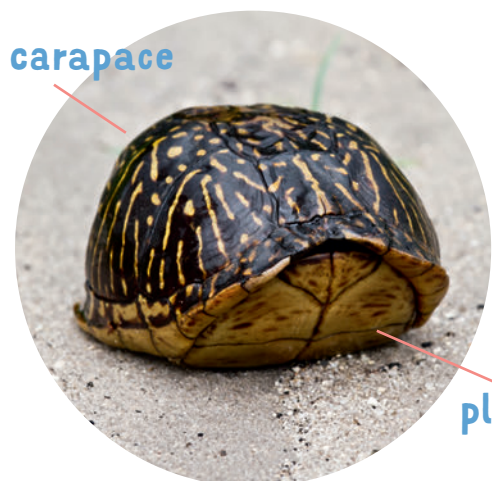
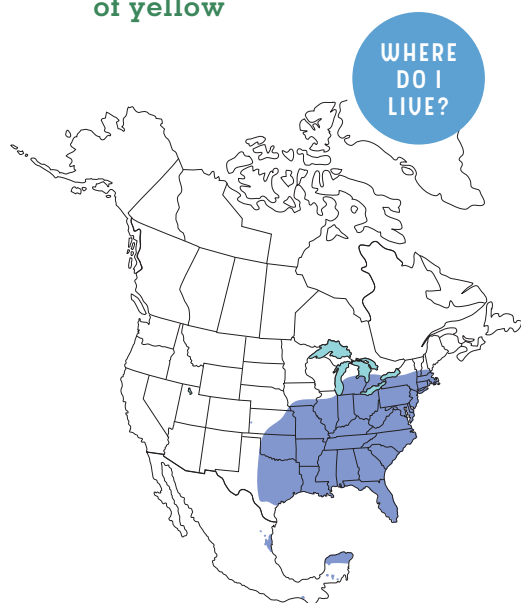
Garter snakes hibernate in big groups during winter. A den can have hundreds of snakes in it.



EASTERN BOX TURTLE

.....
Terrapene carolina
.....

Land-living turtle with a tall, domed shell that has patches of yellow



ID ME

SIZE 4½ to 6½ inches (11 to 17 cm) long

COLOR Brown to black top shell with yellow to orange markings

LOOK FOR ME

Woodlands, meadows, old fields, and backyards

WHAT I EAT

Worms, slugs, mushrooms, and fruit

SOME THINGS TO KNOW ABOUT ME

Box turtles live 30 to 40 years in the wild and twice as long in captivity. Males often have red eyes and females have yellowish eyes.

The ornate box turtle (*Terrapene ornata*) lives in prairies and open woodlands from New Mexico and Texas up through Nebraska and Illinois. Its shell has slash-shaped markings.

A hinge on the bottom shell (the plastron) allows them to completely close themselves into the top shell (the carapace).

FENCE LIZARD

.....
Sceloporus undulatus

Small, fast-moving
 spiny lizard



ID ME

SIZE 4 to 7½ inches (10 to 19 cm) long

COLOR Gray to brown; females have barred pattern on back and males have blue throats and markings

LOOK FOR ME

Open forests, brushlands, grasslands, and rocky hillsides

WHAT I EAT

Ants, beetles, and other insects; spiders; centipedes

SOME THINGS TO KNOW ABOUT ME

Each of this lizard's back scales has a backward pointing spine. It's like armor!

Fence lizards climb trees, walls, and fences to escape danger like a hungry bird, snake, or cat.

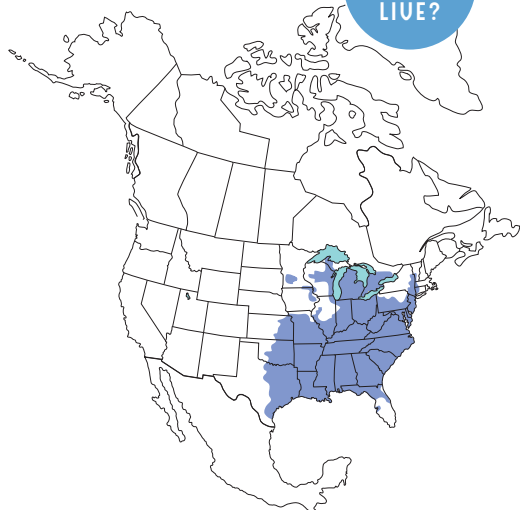
Western fence lizards (*Sceloporus occidentalis*) are bigger and darker. They live west of the Rocky Mountains.

FIVE-LINED SKINK

.....
Plestiodon fasciatus
.....

Smooth, shiny, dark lizard with thin stripes down back and a long tail

WHERE DO I LIVE?



ID ME

SIZE 5 to 8½ inches (13 to 22 cm) long

COLOR Black with long, yellow stripes; blue to gray tail

LOOK FOR ME

Moist woods, gardens, and forests

WHAT I EAT

Spiders, crickets, caterpillars, beetles, and snails

SOME THINGS TO KNOW ABOUT ME

Rock piles, fallen logs, and other places full of bugs are good places to spot skinks.

Young five-lined skinks have bright stripes and shiny blue tails. Their stripes fade with age and the tail becomes a dull gray.

When a predator attacks, the skink drops its blue tail. The tail goes on twitching, keeping the predator interested while the skink escapes. A new tail eventually grows back.

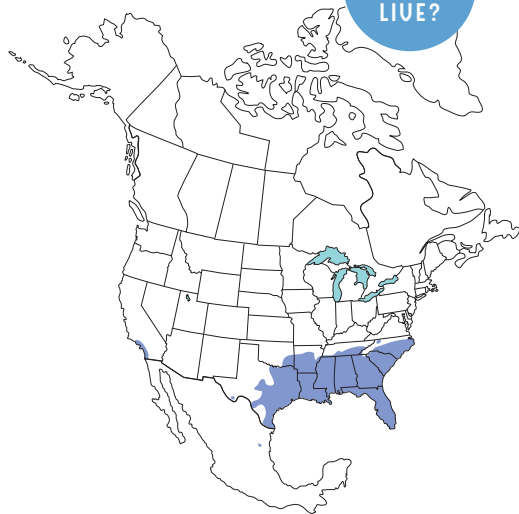


GREEN ANOLE

.....
Anolis carolinensis

Sleek, greenish lizard with a pointy snout, fat toes, and a throat fan

WHERE
DO I
LIVE?



ID ME

SIZE 5 to 9 inches (13 to 22 cm) long

COLOR Green to brown; males have pink, fan-shaped flap of skin on throat

LOOK FOR ME

Parks, woods, fences, and shrubby areas

WHAT I EAT

Beetles, flies, and other insects; spiders

SOME THINGS TO KNOW ABOUT ME

Male anoles have throat fans. These movable flaps of skin under the chin are like signal flags. They use them to court females and chase off intruders.

Like chameleons (which they aren't), anoles change color to display their moods or camouflage themselves. Being a darker color also lets them soak up more heat on a chilly day.

Brown anoles (*Anolis sagrei*) were introduced from the Caribbean and now compete with native green anoles in Florida and other places along the Gulf Coast.

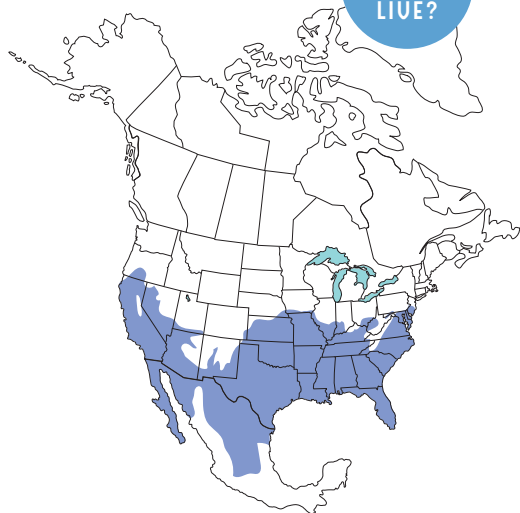
KING SNAKE

.....
Lampropeltis getula
.....

Large, shiny, black snake
with linking, light-colored
bands



WHERE
DO I
LIVE?



ID ME

SIZE 3 to 5 feet (1 to 1.5 m) long

COLOR Dark brown to black body with
white to yellow bands

LOOK FOR ME

Dry woods, rocky hillsides, prairies, and
deserts

WHAT I EAT

Mice, lizards, birds, frogs, and snakes

SOME THINGS TO KNOW ABOUT ME

Kingsnakes hang out in log and brush piles.
They hunt at dawn and dusk, or at night
during hot weather.

Kingsnakes hunt rattlesnakes and
copperheads and are immune to their
venom.

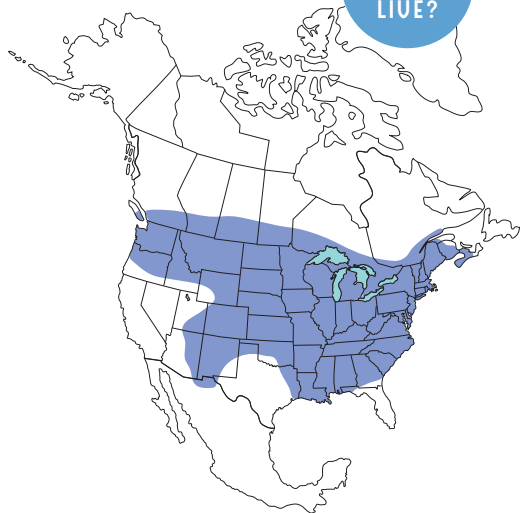
Kingsnakes and their milk snake cousins
are constrictors. They kill by wrapping
themselves around prey and squeezing.

PAINTED TURTLE

.....
Chrysemys picta
.....

Medium-sized, freshwater turtle with red markings on the edges of its shell and on its neck

WHERE
DO I
LIVE?



ID ME

SIZE 4 to 9 inches (10 to 23 cm) long

COLOR Olive to black top shell with red marks on edges; orange bottom shell; black-and-yellow striped head; red lines on neck

LOOK FOR ME

Marshes, ponds, shallow lakes, slow creeks, and rivers

WHAT I EAT

Water plants and animals, including insects and fish

SOME THINGS TO KNOW ABOUT ME

Painted turtles warm up by basking on logs. If there isn't much space, they'll stack up on top of each other.

Young turtles need meat to grow properly, but older turtles eat mostly plants.

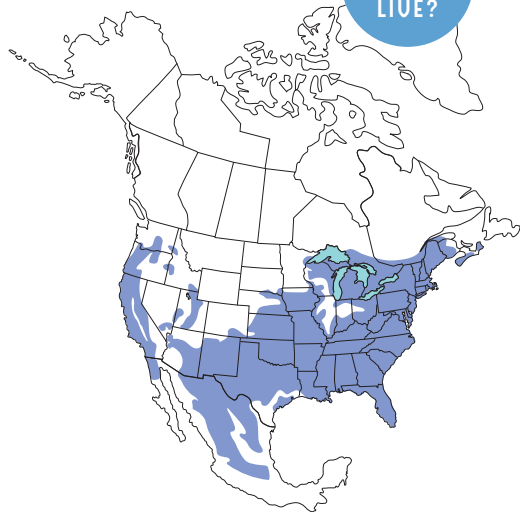
The painted turtle is the most widespread native turtle in all of North America. Fifteen-million-year-old fossils of it have been found.

RINGNECK SNAKE

.....
Diadophis punctatus
.....

Small, slender snake
with a bright belly and
neck ring

WHERE
DO I
LIVE?



IDENTIFY ME

SIZE 10 to 30 inches (25 to 75 cm) long

COLOR Gray-green to black on back, yellow to red belly, orange ring around neck

LOOK FOR ME

Moist forests, grasslands, and along desert streams

WHAT I EAT

Worms, slugs, salamanders, and small lizards

SOME THINGS TO KNOW ABOUT ME

This secretive, shy snake hides and hunts under flat stones and leaf litter.

Ringneck snakes are harmless but let loose stinky poop and pee when picked up.

When some ringnecks feel threatened, they wrap into a coil and stick their tail up in the air while protecting their head. Better a bite to the tail than to the head!



GRAY TREEFROG



5

WELCOME

FROGS, SALAMANDERS & OTHER SLIPPERY NEIGHBORS



RED EFT

THERE'S SOMETHING WONDERFUL ABOUT FINDING A NEWT under a lifted rock or hearing frogs calling at night. Hosting slippery creatures like these in your yard means you're doing something right. They can't live just anywhere.

FROGS, TOADS, NEWTS, AND SALAMANDERS are amphibians. Like reptiles, they are cold-blooded and more common in milder regions. But most amphibians hatch from eggs laid in water and live at first as a water creature.

TADPOLES AND BABY SALAMANDERS breathe with gills and swim like fish. They spend weeks or months in water before sprouting legs and starting their lives on land. Living between two worlds makes amphibians vulnerable to pesticides and pollution both on land and in water.

NORTH AMERICAN FROGS, TOADS, NEWTS, AND SALAMANDERS are meat-eating predators. Adults hunt whatever bug, fish, slug, or other animal they can catch and swallow. Tadpoles and baby salamanders are less picky. Most eat whatever is in the water, including algae and plants.



YARDS WITH
TOADS,
SALAMANDERS,
AND THEIR KIN
ARE A SIGN OF A
HEALTHY HABITAT.



BULLFROG



WHAT'S THE DIFFERENCE?

Frogs and toads are amphibians. They are more alike than different. Here's how to tell them apart.

Toad

thick, dry, bumpy skin

round, plump body

shorter legs that walk or hop



thin, wet, smooth skin

longer, slim body

Frog

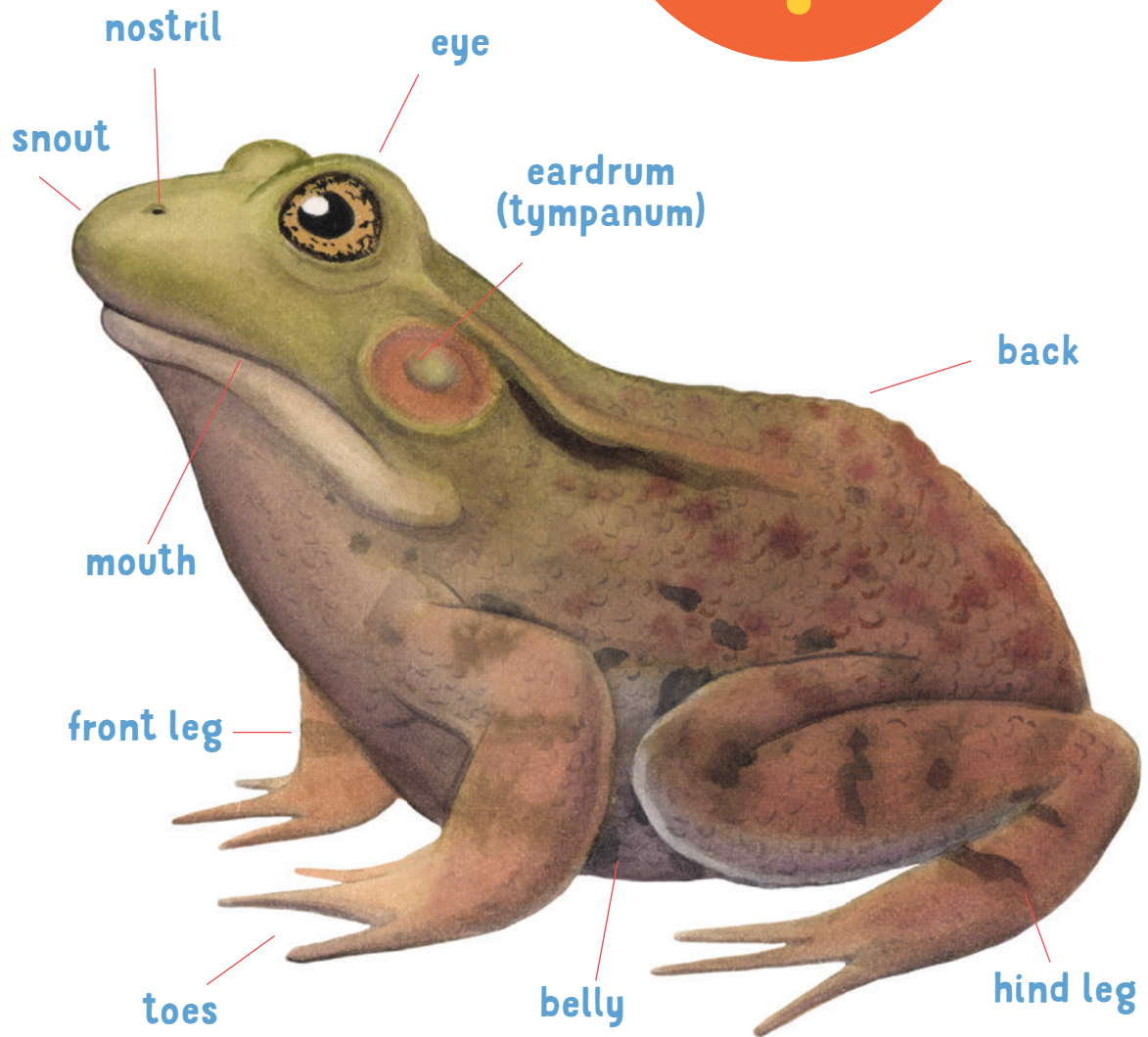


longer legs that leap

EVEN LAND-LIVING AMPHIBIANS need to stay moist to breathe. If their smooth, slimy skin dries out, they suffocate. Frogs, newts, and other amphibians need shelter from the sun and weather. Damp, rotting logs, shady, dense plants, and rocks in moist low places are amphibian havens.

SALAMANDERS, NEWTS, FROGS, and toads don't build nests. Most lay eggs in watery spots — ponds, rain-filled ditches, or slow streams. Springtime pools of water that dry up in summer are especially great for frogs and salamanders. There are no fish in them to eat the tadpoles and baby salamanders. Letting a swampy area of your yard simply be is a great help to these backyard wonders.

BIO BASICS
PARTS OF A
FROG





MATERIALS

Hard plastic
wading pool
or other large
shallow tub

Sand or gravel

Shovel

Rocks

Water

Water plants
(optional)

KIDDIE-POOL FROG POND

Ponds are wildlife magnets that provide all of the Big Four habitat requirements! A permanent pool of water provides shelter and nesting places for aquatic bugs, a drinking spot for all sorts of animals, and a must-have habitat for frogs. A pond is where frogs find mates, breed, and lay their jellylike eggs.

HOW TO



- 1 Find a low, shady, sheltered area at the bottom of a hill or slope. That way rain will help keep the pool full. Turn the pool upside down in the spot you've chosen and use some sand or gravel to create an outline. Remove the pool.



- 2 Dig out the area you outlined. Pile up the dirt in one spot; you'll need it later. Set the pool into the hole, digging out or filling in with dirt to get it to fit. The pool doesn't have to be level, but the bottom has to be supported or it will crack over time.



- 3 Arrange some flat rocks all around the outside edge of the pond, using leftover dirt to level and secure them. Place a couple of large rocks or bricks in the pool, especially near the inside edges. These help the frogs get in and out.



- 4 Dump an inch (2.5 cm) or so of sand or gravel into the pool. Cover the bottom of the pool with several shovelfuls of dirt. Add a layer of gravel or sand. Fill the pond with water and add a few aquatic plants if you want. A consistent water level is best, so add more water as needed.



MATERIALS

Scissors

Aluminum foil
duct tape,
1¾ to 2 inches
(4–5 cm) wide

Nail

Thin PVC pipe,
1¾ inches (3 cm)
in diameter and
2 feet (61 cm)
long

Bungee cords

TREE FROG HIDEOUTS

Want to help tree frogs? These homemade hideouts are perfect perches for their nighttime bug hunts. During the day, the hideouts provide safe, shady shelter from predators.

HOW TO



- 1** Cut a 3-inch (7.5 cm) strip of foil duct tape. Fold it in half lengthwise, sticky sides together. Fold over any sticky surfaces along the edges. Use the nail to poke a hole in the center of the folded tape.



- 2** Place the folded duct tape over one end of the PVC pipe, centering the hole so rainwater will drain. Attach it with more duct tape wrapped around the pipe.



- 3** Find a shady tree, near water if possible. Strap your tree frog hideout onto the tree's trunk with bungee cords. Put the open end at eye level so you can see who's in there!

• NOTE •

If you live near the tropics, like in southern Florida, this version is better suited to your climate:

- 1.** Use a 3-foot (91 cm) length of PVC pipe and ask an adult to saw off one end at a slant.
- 2.** Push the slanted end firmly into the ground near some lush plants.
- 3.** Drill or hammer a drain hole a few inches (5–6 cm) above the soil level.



MATERIALS

Outdoor glue or waterproof caulk

Terra-cotta or plastic plant pots, broken or not

Paint and/or decorations (optional)

Hand trowel

Leaf litter and moss (optional)

TOAD ABODES

Toads spend more time on land than frogs do. These bumpy-skinned amphibians are prey for snakes and birds so are always looking for places to hide. Help them out by adding some toad-friendly hangouts to cool, damp, shady spots in your yard. Gardeners will thank you, too! Toads eat lots of slugs and other veggie-gobbling pests.

HOW TO



- 1** Glue broken pots or terra-cotta pieces together to make a toad house with a doorlike opening. Or use an unbroken pot.



- 2** Decorate the toad abode, if you'd like. Paint it or glue on glass globes or shells. If your pot is unbroken, only decorate half of the pot. (The other half will be buried in the ground.)



- 3** Let your pot dry.



- 4** Choose a damp shady place. Bury a whole pot halfway to make a cave. Sink a glued-up upright pot into the soil an inch (2.5 cm) or so. Some leaf litter inside and moss outside make it toad-ally welcoming.



You can hear the calls of
different frogs on the websites
listed on page 174.

WHO'S THAT CALLING?

Every species of frog has a
different call. Learning frog calls
lets you know who's around.



..... TIPS FOR ATTRACTING FROGS TO A POND



- Don't install a fountain. Frogs like still water.
- Forget the fish; they eat frog eggs.
- Add some pond plants like lily pads.
- Don't let the water level get too low, especially in summer.
- Provide hiding places and cover around the pond. Let grass or weeds grow high, or create piles of leaves, logs, rocks, or brush.



WILD NOTES AMPHIBIANS

Wondering what else to take note of?

- Use the Field Guide pages to figure out which frogs, toads, and salamanders you've seen. Keep a list of all the amphibians, when you saw them, and where. Include egg masses and tadpoles.
- Project updates are important! What's working, what's not? Any ideas for improvements?
- Map a toad's-eye-view route through the yard and fill in the gaps with logs or rocks that provide cover.

..... EMBRACE THE MESS!



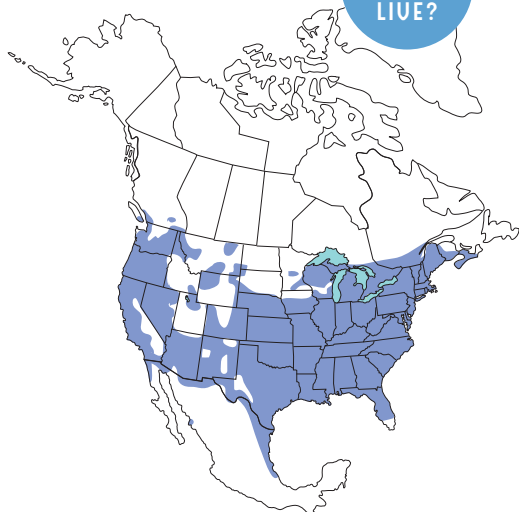
Frogs and toads seek out the dark, damp spaces under piles of leaves, brush, and logs. Patches of tall grass and thick plants provide protection from the sun and predators.

AMERICAN BULLFROG

.....
Lithobates catesbeianus

Very large, green frog with big, bulgy, gold eyes and wide mouth

WHERE
DO I
LIVE?



ID ME

SIZE 4 to 8 inches (10 to 20 cm) long

COLOR Green or green with dark splotches on top, light belly

VOICE Loud jug-O-rum, jug-O-rum

LOOK FOR ME

Ponds, lakes, or slow streams with plants

WHAT I EAT

Bugs, fish, frogs, snakes, and birds

SOME THINGS TO KNOW ABOUT ME

The largest frog in North America, a bullfrog can weigh more than a pound (0.5 kg).

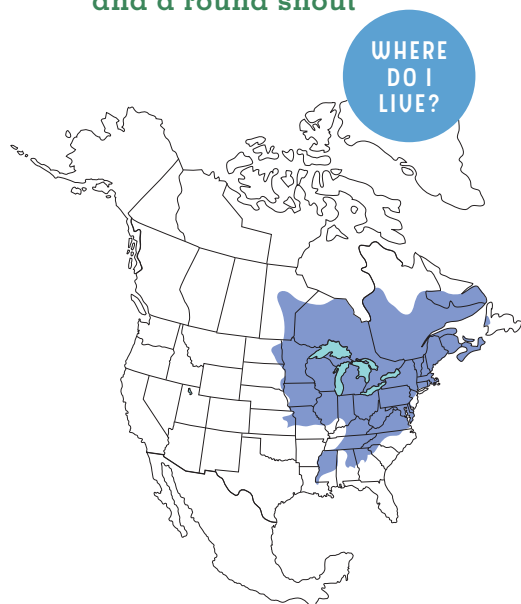
Bullfrogs will eat whatever they can catch, which is a lot because they're so big. Baby ducks, songbirds getting a drink, and anything in the water is fair game.

Bullfrogs become pests when they're introduced into non-native habitats. They'll eat everything else that lives in a pond.

AMERICAN TOAD

.....
Bufo/Anaxyrus americanus

Bumpy, plump, short-legged hopping toad with a light-colored line down its back and a round snout



ID ME

SIZE 2 to 4 inches (5 to 10 cm) long

COLOR Brown, gray, and/or rusty red with bumpy spots

VOICE Long, cricketlike trill

LOOK FOR ME

Gardens, woods, ponds, and lakes

WHAT I EAT

Insects, worms, slugs, and snails

SOME THINGS TO KNOW ABOUT ME

Woodhouse's toad (*Bufo woodhousii*) has a pointier snout and darker brown blotchy back. It's more common west of the Mississippi River.

Toads live in drier areas than most frogs but need water to breed and lay eggs.

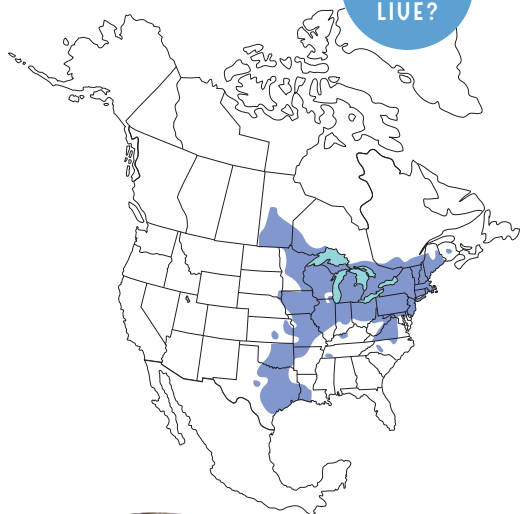
Unlike most toads, American toads have long, sticky, bug-zapping tongues.

GRAY TREE FROG

.....
Hyla versicolor

Frog with long legs,
 round suction-cup toes,
 bumpy skin on back,
 and dark eyes

WHERE
DO I
LIVE?



IDENTIFY ME

SIZE 1 to 2 inches (3 to 5 cm) long

COLOR Brown to green to gray with dark blotches on back and yellow-orange inside thighs

VOICE Medium chirplike trill

LOOK FOR ME

Shrubs and trees near water

WHAT I EAT

Insects

SOME THINGS TO KNOW ABOUT ME

This nocturnal hunter comes out at night to find tasty bugs.

The gray tree frog rarely comes down to the ground, spending most of its time in trees and bushes.

Gray tree frogs prefer to breed on branches hanging over a pond or shallow water. That way the eggs fall right in! Tadpoles hatch out of the eggs after about a week, sooner if the water is warm.

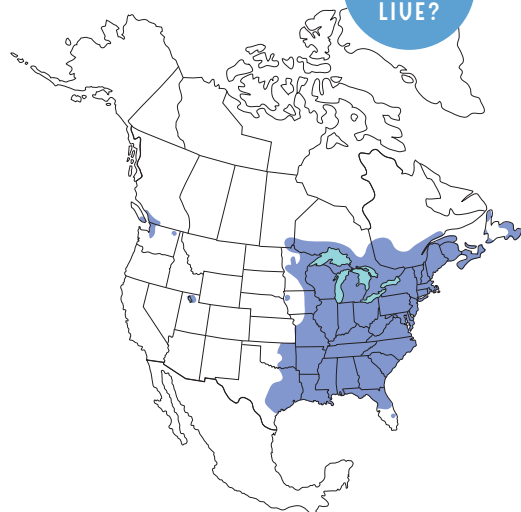


GREEN FROG

Lithobates clamitans

Green to brown frog with back ridges and bulgy eyes

WHERE DO I LIVE?



ID ME

SIZE 2 to 4 inches (5 to 10 cm) long

COLOR Green to brown

VOICE One-note, loose-banjo-string

SOUND twaaanng

LOOK FOR ME

Shallow streams, ponds, and springs

WHAT I EAT

Bugs, frogs, and small fish

SOME THINGS TO KNOW ABOUT ME

Big green frogs can look like small bullfrogs. Check for back ridges, which bullfrogs don't have.

Green frogs are more brownish bronze in color in the South and greener in the North.

Males have eardrums twice as big as their eyes; female eardrums are smaller.

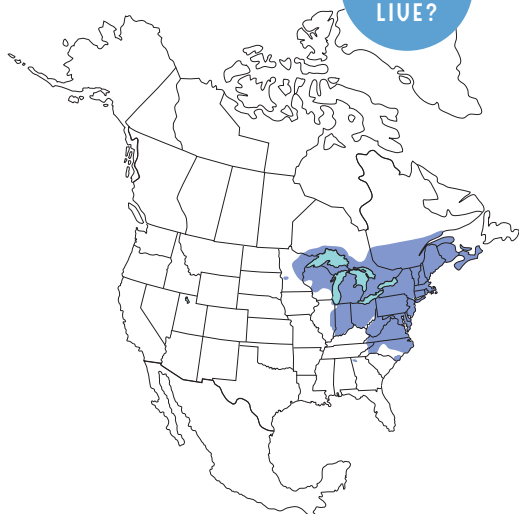


RED-BACKED SALAMANDER

.....
Plethodon cinereus

Long, skinny, dark salamander
 with orangish back stripe

WHERE
DO I
LIVE?



ID ME

SIZE 2½ to 4 inches (6 to 10 cm)
long

COLOR Dark gray to black body
with small light spots; some have
yellow to red stripe on back

LOOK FOR ME

Under logs, rocks, or moist leaves
in woods

WHAT I EAT

Mites, spiders, millipedes, snails,
ants, beetles, and earthworms

SOME THINGS TO KNOW ABOUT ME

Like many salamanders, they
can drop off their tail to escape a
predator. A new one eventually
grows back.

Unlike most amphibians, red-
backed salamanders don't have a
water life stage. Tiny salamanders
hatch out of eggs laid under a log or
in a burrow.

Red-backed salamanders are
important insect predators that eat
garden pests.

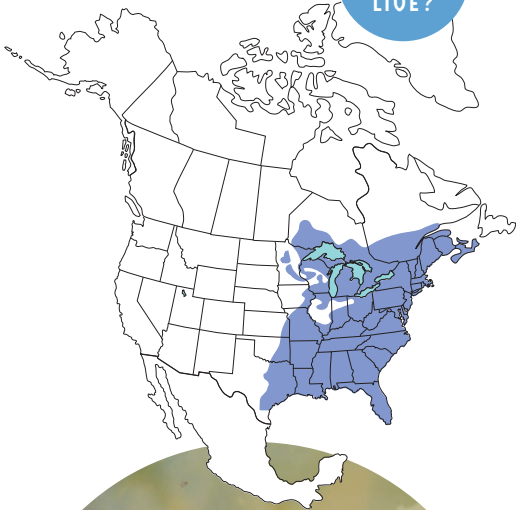
RED-SPOTTED NEWT

.....
Notophthalmus viridescens

Slender, bright-red, rough-skinned salamander with spots, found under leaves or logs



WHERE DO I LIVE?



IDENTIFY ME

SIZE 2½ to 5 inches (6 to 12 cm) long

COLOR Adult: Olive on top with red spots outlined in black; yellow below with small black spots. Eft (young newt): Bright reddish-orange all over with red spots outlined in black on back

LOOK FOR ME

Adults in ponds and swamps; efts in moist woods

WHAT I EAT

Snails and insects on land; snails, insects, worms, fish eggs, and tadpoles in water

SOME THINGS TO KNOW ABOUT ME

These newts spend two to seven years as red efts, living on land. Once ready to breed, efts change into adults and move to water.

Water-living adults stay active all year. In winter they sometimes can be seen swimming under ice.

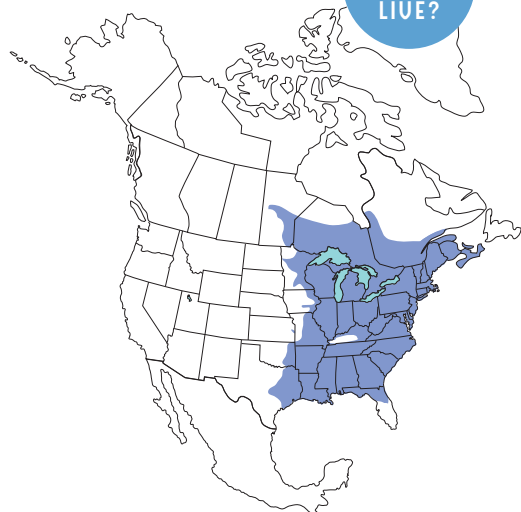
Many predators leave red-spotted newts alone because their skin oozes an irritating and bad-tasting toxin.

SPRING PEEPER

.....
Pseudacris crucifer

Small, brownish frog with a darker X marking on back

WHERE
DO I
LIVE?



ID ME

SIZE ½ to 1 inch (1 to 3 cm) long

COLOR Tan to brown to gray

VOICE High-pitched, whistle-like *preep*, *preep*

LOOK FOR ME

Wooded areas with ponds, swamps, or temporary spring pools

WHAT I EAT

Insects, spiders, and small bugs

SOME THINGS TO KNOW ABOUT ME

These small frogs spend winters hibernating under logs or tree bark. In very early spring, the males gather in groups and call to the silent female frogs.

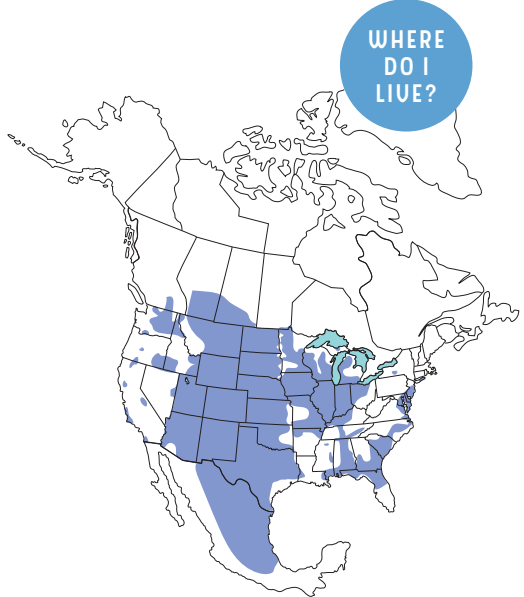
Spring peepers are a kind of chorus frog. All are early spring singers. Depending on where you live, there are western chorus frogs (*Pseudacris triseriata*) and spotted chorus frogs (*Pseudacris clarkii*).

One small spring peeper female will lay as many as a thousand eggs between March and June.

TIGER SALAMANDER

.....
Ambystoma tigrinum

Large, plump, big-headed, and dark-colored salamander covered in yellowish markings



IDENTIFY ME

SIZE 6 to 10 inches (15 to 25 cm) long

COLOR Brown to black body with yellow to olive spots and splotches

LOOK FOR ME

Woodlands, grasslands, and forests near water

WHAT I EAT

Worms, snails, insects, and slugs

SOME THINGS TO KNOW ABOUT ME

The tiger salamander is the largest land-living salamander in North America.

These big salamanders dig burrows up to 2 feet (61 cm) deep. They spend most of the year underground.

In general, salamanders eat whatever they can catch and fit into their mouth. Depending on their size, that might include frogs, baby snakes, newborn mice, and even smaller salamanders.



EASTERN COTTONTAIL

6

FOX

HELP OUT YOUR

FURRY

FRIENDS

SKUNK

IMAGINE SEEING A FOX slipping under a fence, a deer drinking from a pond, or a woodchuck nibbling clover in the lawn. Spotting furry wild animals in your backyard is something special. It's like you live in the wilderness, too!

ANIMALS WITH FUR OR HAIR are mammals. They give birth to live young that drink mother's milk. (Yep, you're a mammal!) Like birds, mammals are warm-blooded. They need to eat a lot of food to fuel their steady body temperature. Some are meat-eating predators, while others munch berries, nuts, seeds, and plants.

MANY MAMMALS ARE PREY for owls and hawks, snakes and coyotes. Voles, rabbits, and squirrels are food for other backyard wildlife. Your yard is part of the web of life!

MOST MICE AND OTHER SMALL MAMMALS get water from eating juicy plants or drinking dew. But larger mammals will travel miles to ponds, birdbaths, and other water sources — especially if you live someplace with a dry or hot season.



NORTH AMERICAN
MAMMALS RANGE
FROM SMALL
BATS WEIGHING
LESS THAN A
POTATO CHIP TO
GRIZZLY BEARS
STANDING 10 FEET
(3 m) TALL.



CHIPMUNK



SKUNK



DEER



MEXICAN
FREE-TAILED
BAT

A GOOD MAMMAL HABITAT also

includes shelter. Bushes, log piles, tall grass, and rock stacks are places for chipmunks to hide, foxes to hunt, and rabbits to make nests. Squirrels depend on large trees for nuts and nesting spots, and hollow logs are favorite sleeping spots for raccoons, foxes, and opossums.

IN COLD CLIMATES, MAMMALS can have a hard time finding food in winter. Some insect-eating bats simply fly south. Other mammals save energy by sleeping away the winter underground or by snacking on stored food like dried grasses or seeds.

TRUE HIBERNATING MAMMALS, like cave bats and woodchucks, don't eat or drink. Their

bodies slow down and survive on stored fat.

Many mammals need to eat a year's worth of food during the warmer months. Another reason to make your backyard into a mammal-friendly habitat!



WHITE-TAILED
DEER

BIO BASICS
PARTS OF A
**GRAY
SQUIRREL**





MATERIALS

Outdoor glue or
waterproof caulk

Paint-stirring
stick

Large wide-
mouthed jar
or tub

Nuts or birdseed

Wire or bungee
cord (optional)

EAT-IN DINER

Invite some chipmunks or squirrels in for a snack with this see-through feeder. You'll be able to get a good look at the action!

HOW TO



- 1 Glue the stick onto one side of the jar.



- 2 Fill the bottom of the jar with nuts or birdseed.



- 3 Choose an easy-to-watch place for your diner. You can attach the feeder to a deck railing, post, or low branch by wrapping wire or a bungee cord around the stick.

Or if you know chipmunks are living in a stone wall or a tree, just set the diner on the ground near their home. Get your camera ready!



MATERIALS

2- to 2.5-inch
(5 to 6.4 cm) diameter
metal spring toy,
like a Slinky

12-inch (30 cm)
macramé hoop or
a wire hanger bent
into a hoop

2 large paper clips
or small binder clips

10–12 zip ties

Scissors

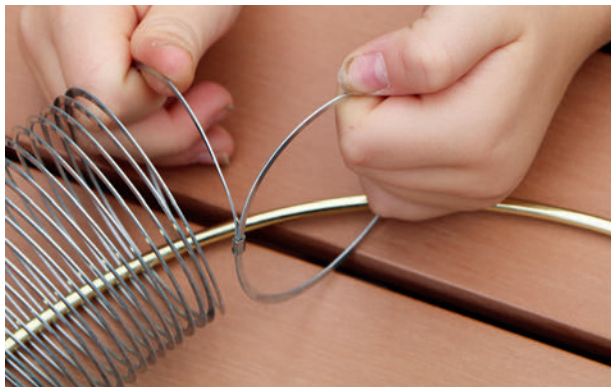
Unshelled raw
unsalted peanuts

String or cord

NUTTY WREATH

Squirrels love peanuts! Make a fun wreath full of this nutty treat from a spring toy and wire hoop. Many birds — like wrens, nuthatches, and blue jays — will thank you, too.

HOW TO



1 If the top and bottom coil of your spring toy are closed loops, either pry off the band to open the loop or bend that first coil out of the way.

• NOTE •

If you're using a hoop made from a hanger, just thread the spring toy on it, twist the ends of the hanger together with pliers, and go to step 3.

2 Hold one end of the spring toy. Wrap the first coil around the hoop. Keep going until the whole spring toy is on the hoop. It takes a while!



3 Use paper clips to join the ends of the spring toy. Lay the hoop flat and spread the coils evenly around it.



4 Zip tie a coil to the hoop on the opposite side from the paper clips. Make it tight! Add another zip tie every five or so coils. The spring shouldn't sag. Cut off the zip-tie tails.



5 Fill the wreath with unshelled peanuts. Attach a string or cord to hang the nutty wreath from a tree or hook.



Want to build your own bat house? Look for the web address on page 175.

PAIN A BAT HOUSE

Bat houses attract these mosquito-munching flying mammals by giving them places to roost and raise young. But before putting one up, make sure it's a suitable home.

The color of the house matters. In colder regions, use dark colors that will soak up heat from the sun.

Many store-bought bat houses are too small. It needs to be at least 2 feet (61 cm) tall and 14 inches (36 cm) wide.

Bats need a landing area below the entrance or inside.



MIDNIGHT GARDEN

Bats eat insects, not plants. But you can plant flowers that attract tasty nighttime bugs. Try fleabane daisies, evening primrose, phlox, sleepy catchfly, and goldenrod. Use the native plant websites on pages 174–75 to help you choose what grows best where you live.

PHLOX

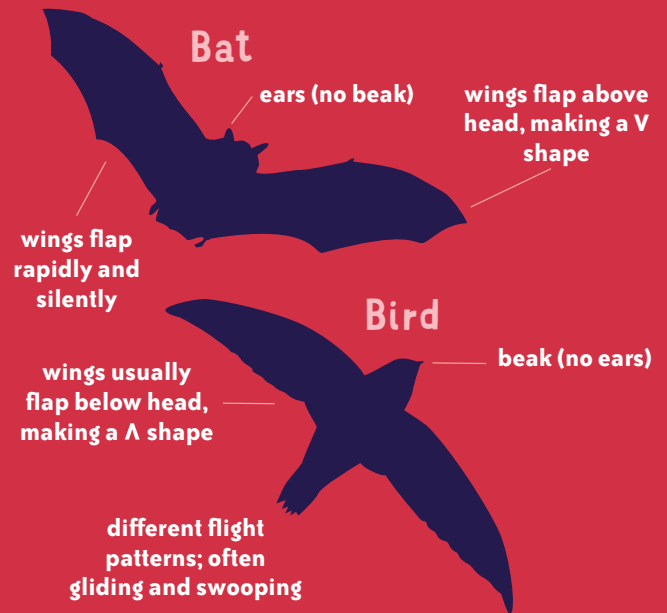


EVENING PRIMROSE



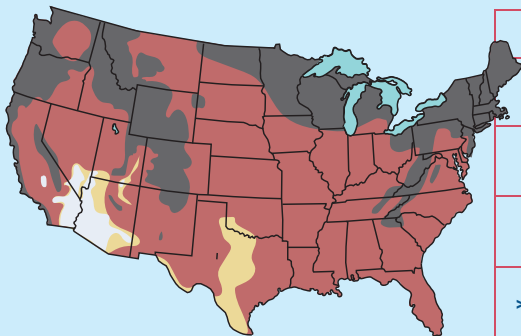
WHAT'S THE DIFFERENCE?

When the sun sets, bats come out and birds head to bed. In the low light of evening, it can be hard to tell bird from bat. Here's what to look for.



WHAT COLOR SHOULD YOUR BAT HOUSE BE?

Find where you live on the map. Use the recommended color, using a water-based stain or flat outdoor paint.



BAT HOUSE COLOR RECOMMENDATIONS AND AVERAGE DAILY HIGH TEMPERATURES IN JULY

	AREAS	WOODEN	PLASTIC/STUCCO
< 85°F/29°C		Black	Dark color
85–95°F/29–35°C		Dark or medium color	Medium color
95–100°F/35–38°C		Medium color	Light color
> 100°F/38°C		White or light color	Light color

MATERIALS

½ cup (120 mL)
vegetable oil

1 cup (240 mL)
brown sugar

1 cup (240 mL)
molasses

2 tablespoons
(35 mL) salt

Large mixing bowl

Mixing spoon or
spatula

2 cups (480 mL)
cornmeal

2 cups (480 mL)
old-fashioned oats

Roasting pan

Cooking spray

2-cup (480 mL)
disposable plastic
container

Plastic drinking
straw

Cord or string

Chopstick or skewer

Short, sturdy stick



SWEET & SALTY DEER BLOCK

Deer are big, hungry critters! They can empty a bird feeder or eat through a flower garden in a flash. One way to get a longer look is to put out a salty food block. Deer crave salt because it's hard to find in the wild. Get ready to watch tongues in action.

HOW TO



- 1** Preheat the oven to 325°F (170°C). Put the oil, sugar, molasses, and salt into a large bowl. Stir. Then mix in the cornmeal and oats. Stir until well blended.



- 2** Cover the bottom of the roasting pan with cooking spray. Empty the oats mixture onto the pan. Bake for 15 minutes. Stir the mixture and return to the oven for 15 minutes. Remove from the oven and let cool for 10 minutes.



- 3** Coat the plastic tub with cooking spray. Spoon about 2 inches (5 cm) of still-warm mixture into the tub and press down to compact it.



- 4** Coat a straw with cooking spray. Push the straw into the center of the mixture, all the way to the bottom of the tub. Spoon the rest of the mixture into the tub, pressing it down as you go. Let it set up overnight at room temperature.



- 5** Pop out the block and cut the straw flush with the top. Cut a length of cord about 2 feet (0.6 m) long. Double it and thread the bent end through the straw, pushing it through with the chopstick. Slide the stick into the loop at the bottom. Tie the loose ends into a tight knot to keep the stick in place. Hang the block where deer can reach it, a few feet off the ground.



CORN COB JUNGLE GYM

If squirrels are scaring away your feathered friends from the feeders, give them something else to eat.

Tie a piece of sturdy elastic to each one (or use thin bungee cords). Add a dab of glue in the screw holes if the screws aren't holding; let dry.

Twist screw eyes or use a screwdriver to insert screws into the tops of several dried corncobs.

Hang the bouncy corncobs from a branch at different heights and let the squirrel acrobatics begin!

MAKE SPACE FOR MAMMALS

Turn yard waste into some mammal-friendly space! Moles appreciate leaf piles, while shrews like stacks of rock. Brush piles are great for rabbits, chipmunks, woodchucks, and other creatures looking for shelter, cover from predators, and places to nest.



WEBCAM WILDLIFE WATCH

- Turn a webcam toward a window bird feeder and see who's snacking at seeds while you're away.
- If you're wondering what larger wildlife might be wandering around your yard, consider using a trail camera. These inexpensive all-weather devices automatically snap a photo when something walks in front of it.



WILD NOTES MAMMALS

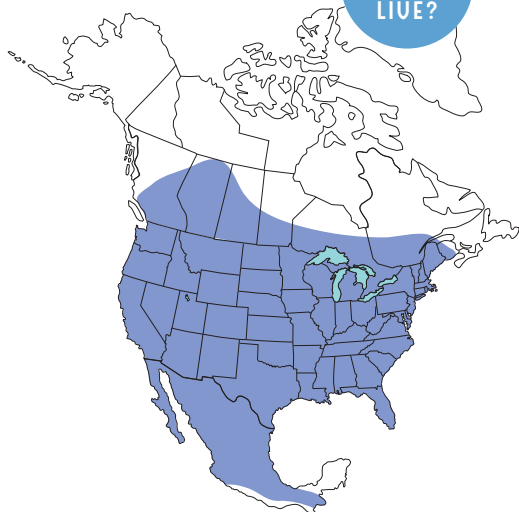
- Use the Field Guide pages to figure out which furry creatures you're seeing. Keep a list of all the mammals spotted, when you saw them, and where.
- Got a trail camera? Map out your yard, keeping track of where you place the camera. Note its height and lens direction, too. Print out any photos and include them with notes.
- Sketch any tracks you see and try to identify them.
- Project updates are important! What's working, what's not? Any ideas for improvements?

BIG BROWN BAT

.....
Eptesicus fuscus

Medium-sized, fast-flapping, furry brown bat with darker ears and face

WHERE
DO I
LIVE?



ID ME

BODY About 3 inches (7.5 cm) long

WINGSPAN 13 inches (33 cm)

SIGNS Smelly, dark, grain-shaped poop under roosts

LOOK FOR ME

Forests, farmlands, parks, and neighborhoods

WHAT I EAT

Beetles, mosquitoes, and moths

SOME THINGS TO KNOW ABOUT ME

Big brown bats sleep away the day in hollow trees and old barns. In winter they hibernate in caves, old mines, attics, or abandoned buildings. They are hardy and put up with people living nearby.

Big brown bats are fast fliers and reach speeds up to 40 miles (64 km) per hour.

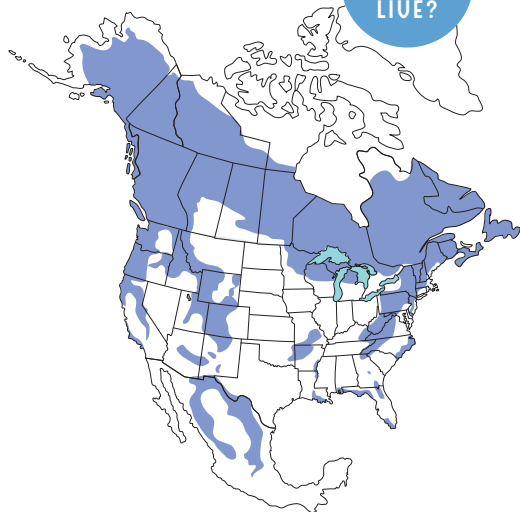
Bat poop, or guano, collects in giant piles under their roosts. It stinks, but gardeners love it because it enriches the soil!

BLACK BEAR

.....
Ursus americanus
.....

Dark bear with paler muzzle and round back

WHERE
DO I
LIVE?



IDENTIFY ME

BODY 4 to 6 feet (1.2 to 1.8 m) long

SIGNS Ripped-apart rotten logs; claw marks on trees; large 6- to 7-inch (15 to 18 cm) tracks with five toes; scat like big dog droppings with seeds and insect shells in it

LOOK FOR ME

Forests, swamps, parks; suburbs in the East

WHAT I EAT

Fruit, berries, nuts, seeds, plants, insects, carrion, and some small prey

SOME THINGS TO KNOW ABOUT ME

Black bears aren't always black. Some are even blond! West of the Rocky Mountains, black bears are often dark brown or red-brown.

There's a big size difference between males and females. Males average 265 pounds (120 kg) and females 175 pounds (80 kg).

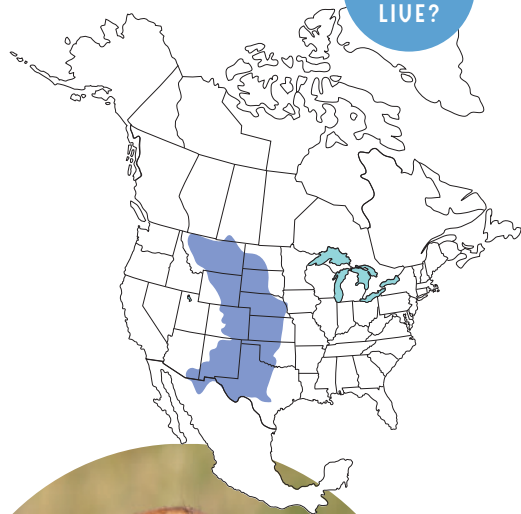
Black bear populations are increasing across North America. They're even showing up at backyard bird feeders and in neighborhood parks.

BLACK- TAILED PRAIRIE DOG

.....
Cynomys ludovicianus
.....

Big, tan ground squirrel
with white belly and
black-tipped tail

WHERE
DO I
LIVE?



ID ME

BODY About 10 inches (25 cm) long

SIGNS Bunch of burrows with hard-packed dirt domes around each hole; wee-oo barks between neighbors

LOOK FOR ME

Short-grass prairies

WHAT I EAT

Grasses

SOME THINGS TO KNOW ABOUT ME

Prairie dogs often stand on their hind legs to get a good view of who is around. When they see or hear danger, they sound the alarm and everyone heads underground.

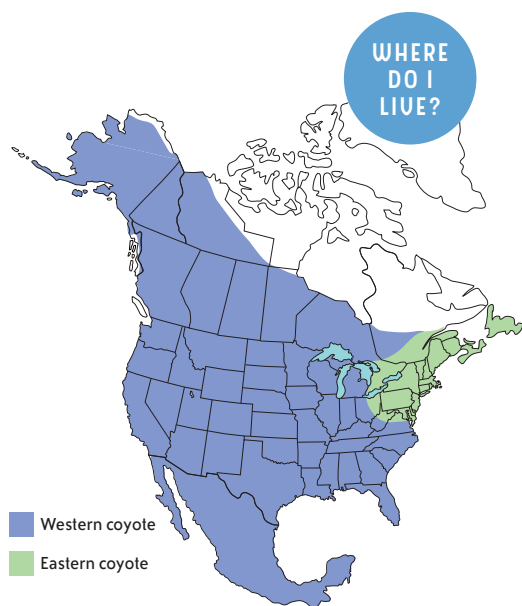
Groups of prairie dogs live in large colonies called towns. Town members cooperate to look out for predators, care for young, and collect hay for winter.

Prairie dogs keep their town's grass clipped short so the view is clear and hungry snakes can't sneak in.

COYOTE

.....
Canis latrans
.....

Gray- to rusty-tan-colored medium wild dog with pointy ears and hanging bushy tail



ID ME

BODY About 3 feet (1 m) long; tail another 12 to 15 inches (30 to 38 cm)

SIGNS Doglike scat full of hair; yipping sound; doglike tracks about 2.5 inches (6 cm) long

LOOK FOR ME

Open plains, forest edges, parks, and suburbs

WHAT I EAT

Rabbits, mice, and other small- to medium-sized prey, carrion, fruit; and garbage

SOME THINGS TO KNOW ABOUT ME

Coyotes were once a western critter. But with wolves now gone from most of the continent, they've found new territory and prey.

Eastern coyotes are bigger and hunt deer. Interbreeding with wolves (*Canis lupus*) near the Great Lakes while moving east may have supersized them.

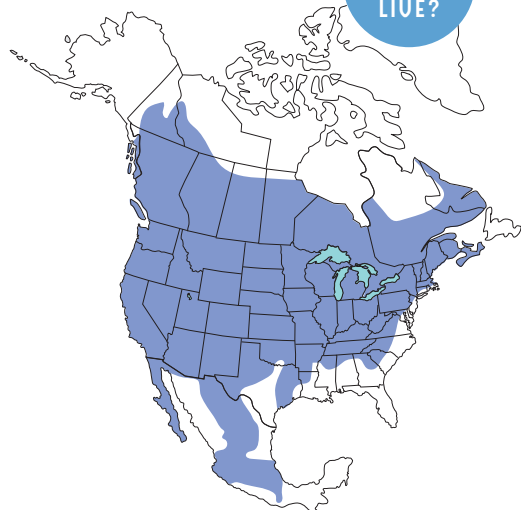
Coyotes are smart and flexible, adapting and learning to survive in all kinds of places. Some are loners, while other coyotes live in packs or with a mate.

DEER MOUSE

.....
Peromyscus maniculatus
.....

Mouse with brown back,
white belly, long white-
bottomed tail, and large
shiny black eyes

WHERE
DO I
LIVE?



ID ME

SIZE Body 3 to 4 inches (8 to 10 cm) long; tail
another 2 to 5 inches (5 to 12 cm)

SIGNS Tiny tracks with four toes and claw
marks; nests in trees, burrows, or hollow logs

LOOK FOR ME

Woodlands, fields, grasslands, suburbs, and
farmland

WHAT I EAT

Seeds, nuts, fruits, insects, and fungi

SOME THINGS TO KNOW ABOUT ME

Deer mice are good climbers and often live in
trees and old bird nests.

A similar cousin is the white-footed mouse
(*Peromyscus leucopus*). But its tail is gray, not
brown on top and white below like the deer
mouse.

Don't confuse them with house mice (*Mus
musculus*) which have gray bellies, naked
tails, and are non-native pests.

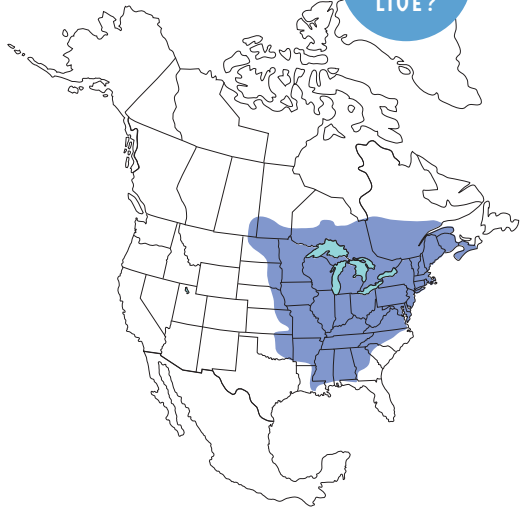
EASTERN CHIPMUNK

.....
Tamias striatus
.....

Small, red-brown animal
with white and dark stripes
along sides and long furry tail



WHERE
DO I
LIVE?



ID ME

SIZE Body about 6 inches (15 cm) long;
tail another 3 to 4 inches (8 to 10 cm)

SIGNS Chewed nuts on logs and rocks;
chip-chip-chip sound; small burrows with
openings hidden within tree roots or under
rock walls

LOOK FOR ME

Leafy forests, suburbs, brushy areas, and
stone walls

WHAT I EAT

Seeds, nuts, berries, and fungi

PLANT THIS FOR ME

Oak, hickory, beech, and walnut trees

SOME THINGS TO KNOW ABOUT ME

Chipmunks dig burrow systems with lots of
holes, chambers, and escape tunnels.

Places with stumps, rocks, and fallen logs
are chipmunk friendly. Chipmunks need
places to perch near hidden burrow holes.

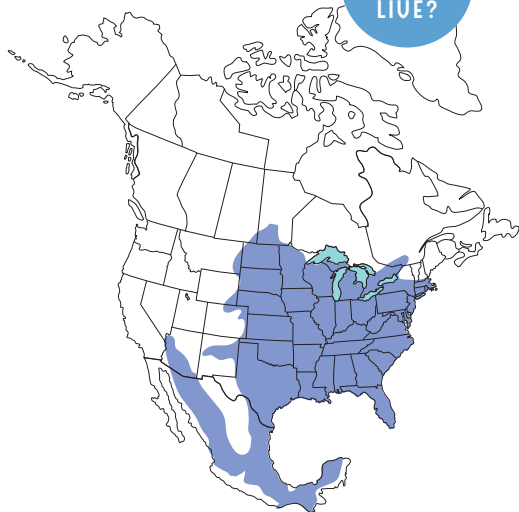
Where winter is harsh, chipmunks
hibernate. In milder places, or during
warmer years, they wake up throughout
the winter to snack on food they stored
in fall.

EASTERN COTTONTAIL

.....
Sylvilagus floridanus

Gray-brown rabbit with
 a fluffy white tail, white feet,
 and rusty neck fur

WHERE
DO I
LIVE?



IDENTIFY ME

BODY 13 to 16 inches (33 to 40 cm) long

SIGNS Small, 1-inch (3 cm), round front tracks with hind tracks three times as long; scat looks like small, round, dark balls

LOOK FOR ME

Old farm fields, suburbs, gardens, parks, swamps, prairies, and forests

WHAT I EAT

Grasses and other plants in summer; bark, twigs, and buds in winter

PLANT THIS FOR ME

Native clovers, grasses, and bushes

SOME THINGS TO KNOW ABOUT ME

One female cottontail can have six or seven litters of five or more kits in a year. That's a lot of bunnies!

Rabbits often feed at night. But you can also see them at dawn and dusk.

Lots of animals prey on cottontails. They run in a fast zigzag dash when escaping a predator.

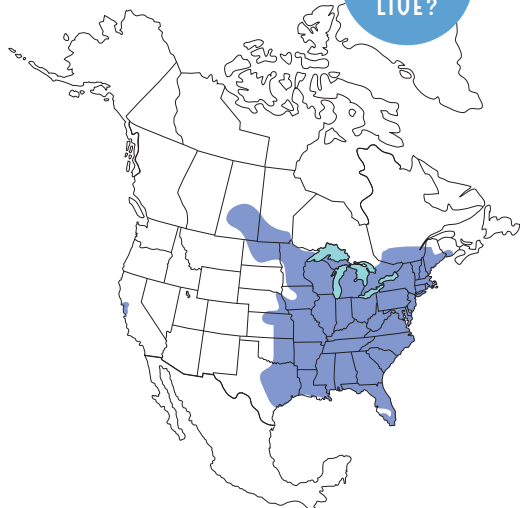
The black-tailed jackrabbit (*Lepus californicus*) is a larger, longer-eared cousin of the cottontail that lives in the western United States and Mexico.

EASTERN GRAY SQUIRREL

.....
Sciurus carolinensis
.....

Gray to gray-brown,
big tree squirrel with
long bushy tail

WHERE
DO I
LIVE?



IDENTIFY ME

SIZE Body about 9 inches (23 cm) long; tail the same length

SIGNS Chewed nuts on ground; leaf nests in trees; front tracks are 1.6 inches (4.1 cm) long with four toe prints while hind tracks are 2.6 inches (6.6 cm) with five toes

LOOK FOR ME

Leafy forests with nut trees, neighborhoods, and cities

WHAT I EAT

Acorns and other nuts, seeds, buds, bark, fungi, and flowers

PLANT THIS FOR ME

Oak, hickory, beech, and walnut trees

SOME THINGS TO KNOW ABOUT ME

Squirrels are important spreaders of tree seeds. Not all the nuts they bury as winter food are eaten. Some sprout and grow into trees that provide more seeds.

Their nests, called dreys, look like big clumps of leaves stuffed into crooks of branches high in trees.

Reddish fox squirrels (*Sciurus niger*) like more open areas and spend more time on the ground than smaller gray squirrels.

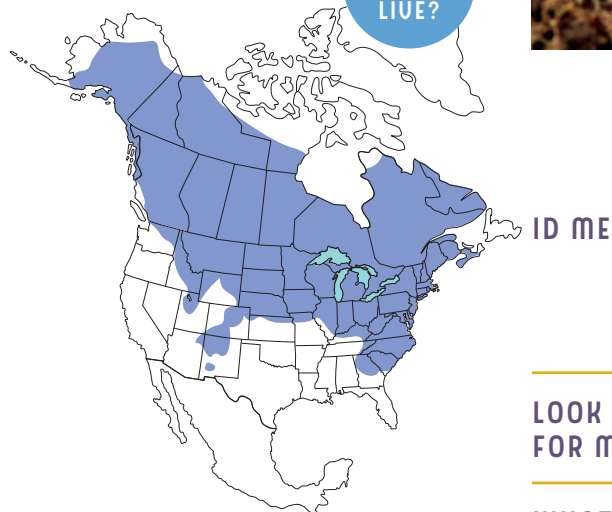


MEADOW VOLE

.....
Microtus pennsylvanicus
.....

Furry, round, chubby brown relative of the mouse with little legs, small ears, and a short tail

WHERE
DO I
LIVE?



SIZE Body 4 to 5 inches (10 to 13 cm) long; tail another 1 to 2 inches (2.5 to 5 cm)

SIGNS Networks of narrow pathways through grasses and plant-covered fields that lead to burrow holes; tracks are 5 inches (13 cm) long with five toes on hind print and four toes on front print

**LOOK
FOR ME**

Fields, meadows, highway medians, and marshes

**WHAT
I EAT**

Plants in summer and seeds, bark, and roots in winter

**SOME
THINGS
TO KNOW
ABOUT ME**

The meadow vole is also called meadow mouse or field mouse. They love tunneling in fields of hay and other crops and are considered a pest by many farmers and gardeners.

Meadow voles are food for everyone from fish to bears. But they breed quickly and year-round so are often plentiful. A single acre can support many hundreds of voles.

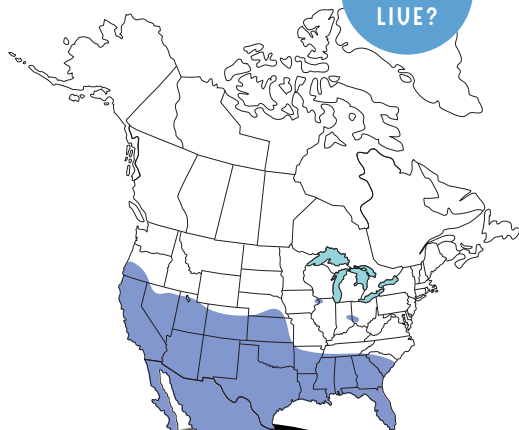
The woodland vole (*Microtus pinetorum*) looks similar but lives in forests east of the Mississippi River.

MEXICAN FREE- TAILED BAT

.....
Tadarida brasiliensis
.....

Medium-sized brown bat with large ears and a pointy tail that's not attached to a flap of skin

WHERE
DO I
LIVE?



ID ME

SIZE Body 2 to 3 inches (5 to 8 cm) long; tail another 1.5 inches (4 cm)

WINGSPAN 11 inches (28 cm)

SIGNS Smelly, brown, rice-shaped droppings under bridges or in caves

LOOK FOR ME

At dusk in farmlands, deserts, and open areas

WHAT I EAT

Moths, beetles, and other flying insects

SOME THINGS TO KNOW ABOUT ME

Mexican free-tailed bats spend winters in central and southern Mexico. They are also called Brazilian free-tailed bats.

These bats are important controllers of farm pests, especially moths that lay eggs in corn and cotton.

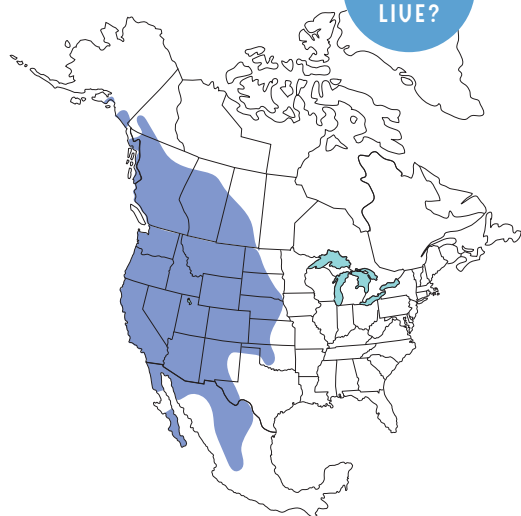
Tens of millions of Mexican free-tailed bats spend their summers in the southern half of the United States. Groups of thousands of mother bats and their pups snuggle into caves and squeeze into cracks under bridges to sleep during the day.

MULE DEER

.....
Odocoileus hemionus

Beefy deer with large “mule” ears and black-tipped tail

WHERE
DO I
LIVE?



ID ME

BODY About 6 feet (2 m) long

SIGNS Tracks from narrow split hooves; dark oval scat pellets almost 1 inch (2 cm) long; small trees with missing bark from males rubbing antlers; patches of flattened grass or snow from napping deer

LOOK FOR ME

Forests, prairies, and mountains

WHAT I EAT

Sprouting and young grasses, twigs, and shrubs

SOME THINGS TO KNOW ABOUT ME

Male mule deer, called *bucks*, shed antlers in January and regrow them over the summer.

In mountain areas, mule deer migrate down to the foothills in winter to find food.

Female mule deer give birth to one or two spotted fawns.

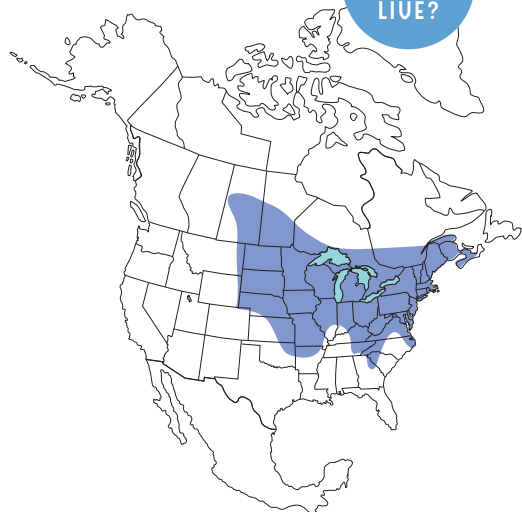
NORTHERN SHORT- TAILED SHREW

.....
Blarina brevicauda
.....

Mouse-sized, gray to brown animal with velvety fur, a long snout, no visible ears, tiny eyes, and a short tail; makes buzzing sounds



WHERE
DO I
LIVE?



ID ME

SIZE Body 3 to 4 inches
(8 to 10 cm) long; tail another inch (2.5 cm)

SIGNS Grass or leaf nests under a log

LOOK FOR ME

Forests, grasslands, and suburbs

WHAT I EAT

Insects, seeds, and worms

SOME THINGS TO KNOW ABOUT ME

Shrews aren't gnawing rodents, like mice. They're insectivores, like moles.

Northern short-tailed shrews taste so bad that dead ones are often left uneaten.

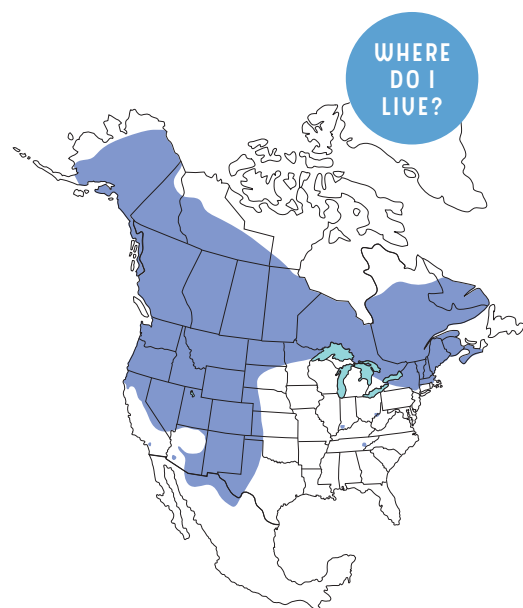
Short-tailed shrews spend most of their time out of sight, tunneling under dead leaves looking for food.



PORCUPINE

.....
Erethizon dorsatum

Big, round, slow-moving
 animal covered in long,
 thick spines called quills



IDENTIFY ME

SIZE Body about 2 feet (61 cm) long; tail another 6 to 12 inches (15 to 30 cm)

SIGNS Chewed tree bark and nipped twigs; piles of oval droppings at the bottoms of trees

LOOK FOR ME

Rocky pine forests in the East and dry, brushy areas in the West

WHAT I EAT

Tree bark in winter and plants in summer

SOME THINGS TO KNOW ABOUT ME

Quills are special, very sharp hairs with barbed tips. When they feel threatened, porcupines make their quills stand up as a warning that attackers will get a face full of needles.

Porcupines move slowly and can't see well, so those quills protect them from predators.

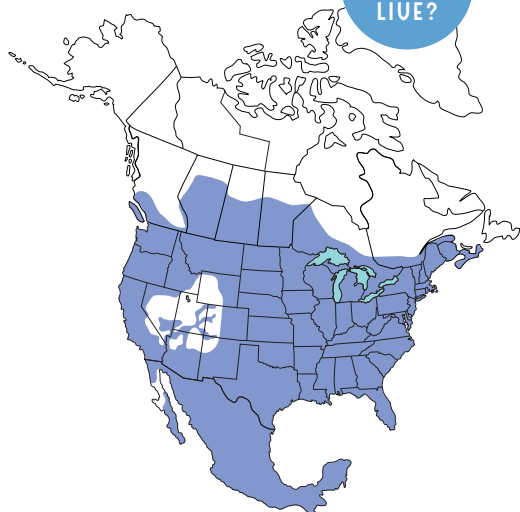
The quills of eastern porcupines are more black and brown. In the West, they are more yellow.

RACCOON

.....
Procyon lotor
.....

Gray, furry animal with
a black face mask and
ringed tail

WHERE
DO I
LIVE?



ID ME

SIZE Body about 1.5 feet (46 cm) long; tail another 10 to 14 inches (25 to 35 cm)

SIGNS Tracks look like 3-inch (75 cm) hands; doglike scat full of seeds; ripped up holes in lawn

LOOK FOR ME

Woods, wetlands, along rivers and creeks, suburbs, and parks

WHAT I EAT

Crayfish, fruit, small prey, worms, grain, crops, and garbage

SOME THINGS TO KNOW ABOUT ME

Raccoons are adaptable omnivores. That means they eat whatever they can find!

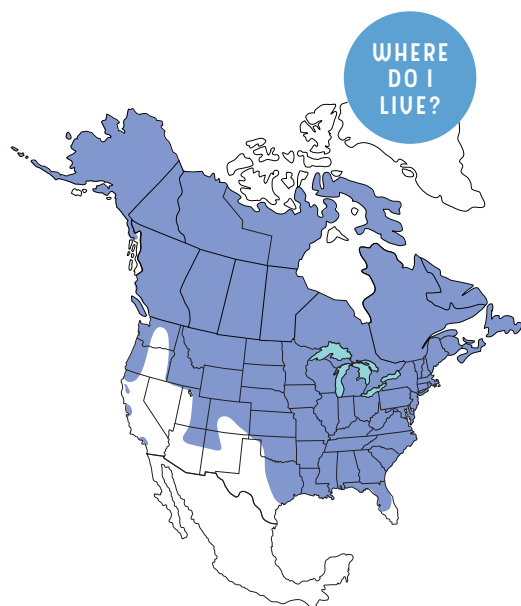
Their front paws have nimble fingers that are able to open trash cans and coolers and feel along the bottom of a stream.

Raccoons are nocturnal and usually sleep away the day in a tree.

RED FOX

Vulpes vulpes

Rusty-red fox with blackish legs and a bushy tail with a white tip



ID ME

SIZE Body about 2 feet (61 cm) long; tail another 12 to 17 inches (30 to 43 cm)

SIGNS Tracks in a straight line, like a cat, but with claw points; dark and pointy droppings with fur, seeds, and bug parts

LOOK FOR ME

Pastures and fields, woodlands, parks, and suburbs

WHAT I EAT

Rabbits and voles in winter; fruit and insects in summer; also birds, mice, and earthworms

SOME THINGS TO KNOW ABOUT ME

Red foxes look like small dogs but move more like cats. They ambush their prey and kill with a jumping pounce.

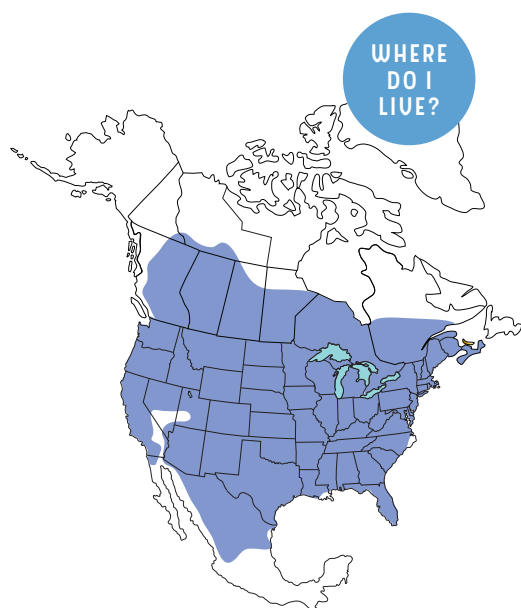
Male-female pairs live together in a territory and raise families together. Each litter has between four and seven young, called kits.

Red foxes can run 30 miles (48 km) per hour and jump over things that are 6.5 feet (2 m) tall. What athletes!

STRIPED SKUNK

.....
Mephitis mephitis
.....

Furry, black-and-white animal the size of a cat with short legs and a wide, bushy tail



ID ME

SIZE Body 13 to 16 inches (30 to 40 cm) long; tail nearly as long

SIGNS Stinky smell, 1.5-inch (4 cm) tracks with five toes; ripped up holes in lawn

LOOK FOR ME

Woods, grasslands, and suburbs

WHAT I EAT

Insects, bird eggs, carrion, fruit, and some small mammals

SOME THINGS TO KNOW ABOUT ME

Skunks can hit an intruder with their smelly, oily spray from 10 feet (3 m) away. They shoot it out of two glands under the tail. A raised tail gives warning, so watch out!

There are several species of skunks with different coat patterns. Striped skunks are black with two thick white stripes on the back that come together in a V at the neck.

All skunks are nocturnal and spend days sleeping in rock piles, hollow logs, old woodchuck holes, or under sheds.

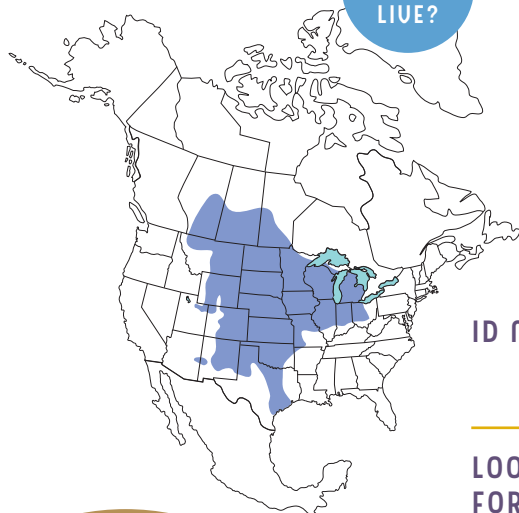


THIRTEEN-LINED GROUND SQUIRREL

.....
Ictidomys tridecemlineatus

Small-eared, tan ground squirrel with lines of stripes and spots along body, often standing on hind legs

WHERE
DO I
LIVE?



ID ME

LOOK
FOR ME

WHAT
I EAT

SOME
THINGS
TO KNOW
ABOUT
ME



SIZE Body about 5 inches (13 cm) long; tail another 3 inches (7.5 cm)

SIGNS Small burrow hole with lots of pathways to it; trilled whistle sound

Mowed grassy areas like pastures, lawns, cemeteries, and golf courses

Seeds, grasshoppers, and crickets

Count the stripes — there really are 13! Some are solid and others are chains of white spots.

Ground squirrels are diurnal (active during the day), making them easy to see.

Winters are spent in deep hibernation with a body temperature lowered to near freezing. Their heart beats slow down to only 4 or 5 times per minute, instead of the usual 200 beats.

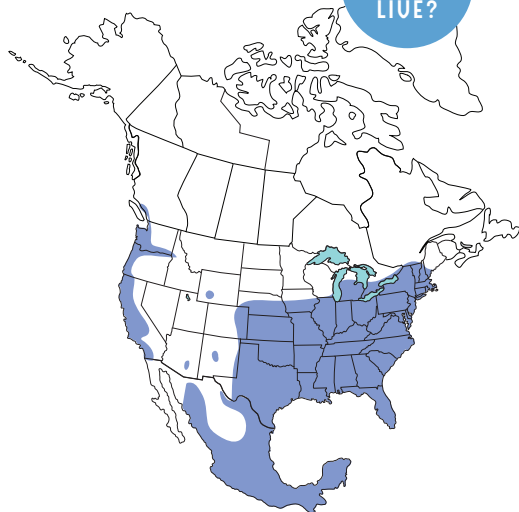


VIRGINIA OPOSSUM

.....
Didelphis virginiana
.....

Gray, furry animal with a long naked tail and white pointy face

WHERE
DO I
LIVE?



ID ME

SIZE Body 15 to 19 inches (38 to 48 cm) long; tail another foot (30 cm) or longer

SIGNS Handlike tracks about 2 inches (5 cm) in size; bright, yellow-green shining eyes at night

LOOK FOR ME

Forests, farmlands, and suburbs

WHAT I EAT

Fruit, grubs, carrion, and garbage

SOME THINGS TO KNOW ABOUT ME

The Virginia opossum is the only marsupial that lives north of Mexico. Marsupials are mammals (like kangaroos) whose babies develop inside a pouch while each is attached to a nipple.

Where winters are cold, opossums often lose their tail tips and ears to frostbite.

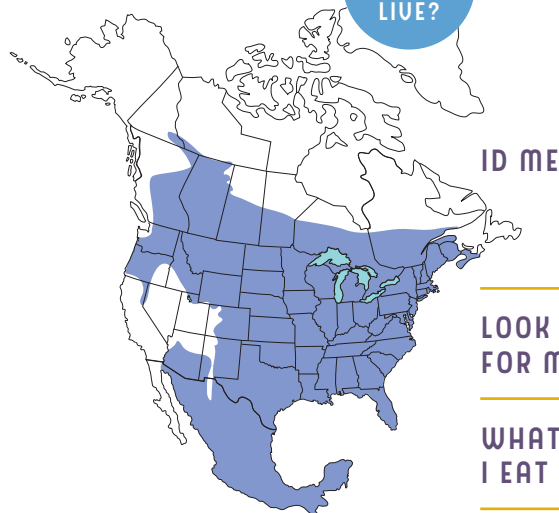
Opossums don't move very fast, but they are great tree climbers. Their strong prehensile (grasping) tails can hold on to branches.

WHITE-TAILED DEER

.....
Odocoileus virginianus

Large, brown deer
 flashing a white
 tail as it runs

WHERE
DO I
LIVE?



LOOK
FOR ME

WHAT
I EAT

SOME
THINGS
TO KNOW
ABOUT ME



BODY About 6 feet (2 m) long

SIGNS Tracks from narrow split hooves; hard, dark scat pellets about 1 inch (2 cm) long; small trees with missing bark from males rubbing antlers; patches of flattened grass or snow from napping deer; clipped flowers and garden plants; shed antlers

Suburbs, woods, farmland, brushy areas, and forest edges

Plants, leaves, twigs, shoots, acorns, berries, seeds, and some grasses

By 1900 most of the eastern United States was deerless because of overhunting. But after a century of controlled hunting and land conservation (and few remaining predators), there are more white-tailed deer in the United States today than before European settlers arrived.

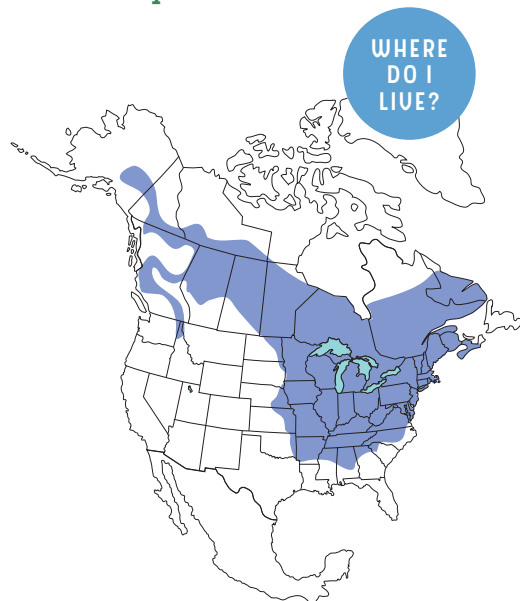
Only male white-tailed deer have antlers. They shed them every year in late winter to early spring and then grow new ones.

Baby white-tailed deer, or fawns, are born with white spots that help camouflage them. For the first month or so, the mother leaves the fawn in hiding while she finds food, coming back only to nurse her baby.

WOODCHUCK

.....
Marmota monax
.....

Big, husky, grizzled brown ground squirrel with little ears and a stubby tail



IDENTIFY ME

BODY 13 to 26 inches (33 to 66 cm) long

SIGNS Large burrow with a 10-inch (25 cm) wide hole; loud single-note whistle

LOOK FOR ME

Meadows, edges of forests, pastures, and suburbs

WHAT I EAT

Grasses and plants

PLANT THIS FOR ME

Native clovers and sorrels

SOME THINGS TO KNOW ABOUT ME

Whether you call it a groundhog, a whistlepig, or a woodchuck, it's North America's largest member of the squirrel family.

Everyone from skunks and raccoons to rabbits and foxes use old woodchuck burrows.

Woodchucks hibernate in winter. Deep in a burrow and curled up in a ball, their heart slows to only a few beats a minute.

WILDLIFE WORDS TO KNOW



AMPHIBIANS. Cold-blooded animals that live in water and breathe with gills when young, then develop lungs and live on land as adults; frogs, toads, salamanders, and newts.

ARACHNIDS. Small invertebrate animals that mostly live on land, have eight legs, no wings, and no antennae; spiders, scorpions, mites, ticks, and harvestmen.

BIODIVERSITY. When many different species live in an area.

BUGS. See *insects*.

CAMOUFLAGE. Colors and/or patterns that help something blend in with its surroundings, making it hard to see.

CARRION. The flesh of dead animals, a source of food for some other animals.

COLD-BLOODED. Having a body temperature that changes with the temperature of the surroundings.

COLONY. A group of animals of the same species that live together.

CONSERVATION. Protecting and maintaining natural places.

COVER. Places for animals to find shelter and hide from predators and/or prey.

CRUSTACEANS. Invertebrate animals with a shell, jointed legs, gills, and antennae; includes lobsters, crabs, shrimps, crayfish, pill bugs, and wood lice.

DIURNAL. Active during the day and sleeping at night.

ECOSYSTEM. A community of plants and animals interacting with each other and their environment.

HABITAT. The place where a plant or animal naturally lives and can survive.

HIBERNATE. To pass the winter in a sleeping or resting state.

HOST PLANT. A particular plant that an animal, like a butterfly caterpillar, needs to eat during part of its life cycle.

INSECTS. Small invertebrate animals with six legs, usually wings, and three body parts; flies, grasshoppers, bees, butterflies, and beetles.

INVASIVE SPECIES. A non-native plant or animal that crowds out the species that live in an area.

INVERTEBRATE. An animal without a backbone; worms, insects, spiders, and slugs.

LARVA (PLURAL LARVAE). A young animal with a different form from an adult; for example, tadpoles, caterpillars, and maggots.

MAMMALS. Animals that are warm-blooded, have a backbone and hair, and feed their young with milk from the mother's body.

MIGRATE. To relocate from one habitat to another in a regular cycle.

MOLLUSKS. Invertebrate animals with soft bodies sometimes covered in hard shells; snails, slugs, clams, mussels, octopuses, and squids.

NATIVE. Originally from a place, rather than coming from or being brought from somewhere else.

NOCTURNAL. Active at night.

NON-NATIVE. Not originally from a particular place.

PESTICIDES. Chemicals used to kill unwanted insects, plants, pest animals, or fungi.

POLLINATION. When flowers are fertilized by pollen carried by insects, wind, birds, or bats.

POLLUTION. Harmful substances in the air, water, and soil because of human activities.

PREDATORS. Animals that kill and eat other animals.

PREY. An animal that is hunted by another animal for food.

REPTILES. Cold-blooded animals — including snakes, turtles, lizards, and alligators — with no legs or short legs and a body covered in scales or bony plates.

SCAT. Animal droppings; also called feces or poop.

SCAVENGER. An animal that eats dead animals and plant material.

SPECIES. A group of plants or animals that share characteristics and are able to breed and reproduce their own kind.

VERTEBRATE. An animal with a backbone; fish, reptiles, amphibians, birds, and mammals.

WARM-BLOODED. Maintaining a constant body temperature; birds and mammals are warm-blooded.



FIND OUT MORE: RESOURCES

Got questions? Here are some websites **w**, books **b**, and apps **a** to check out if you want to know more about the birds, bugs, bats, and other creatures you've seen, or you need help with an ID or more info on native plants.

ALL ANIMALS

w **Animal Diversity Web**
University of Michigan Museum of Zoology
<https://animaldiversity.org>

w **Encyclopedia of Life**
Smithsonian National Museum of Natural History
<http://eol.org>

a **iNaturalist**
www.inaturalist.org

w **a** **Map of Life**
<https://mol.org>

w **a** **MyNature**
www.mynatureapps.com

b **National Geographic Illustrated Guide to Wildlife** by Catherine Herbert Howell (National Geographic Books)

BIRDS

w **All About Birds Bird Guide**
The Cornell Lab of Ornithology
www.allaboutbirds.org/guide

a **BirdsEye**
www.birdseyebirding.com

w **a** **eBird**
The Cornell Lab of Ornithology
<https://ebird.org>

a **Merlin**
The Cornell Lab of Ornithology
<http://merlin.allaboutbirds.org>

HEAR & LEARN BIRD SONGS

w **All About Birds**
The Cornell Lab of Ornithology
www.allaboutbirds.org/how-to-learn-bird-songs-and-calls

w **Bird-Sounds.net**
www.bird-sounds.net

MAMMALS

w **Bat Conservation International**
www.batcon.org

b **Mammals of North America** by Roland W. Kays and Don E. Wilson, 2nd ed. (Princeton University Press)

BUGS

b **Backyard Guide to Insects & Spiders of North America** by Arthur V. Evans (National Geographic)

w **BugGuide**
Iowa State University
<https://bugguide.net>
An easy-to-use clickable guide and lots of photos help you identify bugs.

w **Songs of Insects**
<http://songsofinsects.com>
Listen to cricket, katydid, and cicada calls.

w **Xerces Society for Invertebrate Conservation**
<https://xerces.org>
Learn all about helping native bees, butterflies, and other pollinators.

REPTILES & AMPHIBIANS

w **AmphibiaWeb**
<https://amphibiaweb.org>

w **The Reptile Database**
www.reptile-database.org

HEAR & LEARN FROG AND TOAD CALLS

w **Frog Call Quizzes**
Patuxent Wildlife Research Center
US Geological Survey
www.pwrc.usgs.gov/frogquiz

w **The Songs of Frogs and Toads**
www.mister-toad.com/frogcalls.html

PLANTS & POLLINATORS

w **b** **Bringing Nature Home**
www.bringingnaturehome.net
The website of Doug Tallamy, professor and author of *Bringing Nature Home: How You Can Sustain Wildlife with Native Plants* (Timber Press).

w **Native Plant Finder**
National Wildlife Federation
www.nwf.org/NativePlantFinder
Enter your zip code to discover the best native plants for wildlife where you live.

W Lady Bird Johnson
Wildflower Center

www.wildflower.org/collections
Find native plant lists by state or province, as well as plants that attract pollinators and beneficial insects.

W Pollinator Conservation
Resource Center

The Xerces Society for Invertebrate Conservation
<https://xerces.org/pollinator-resource-center>

a Leafsnap
<http://leafsnap.com>

DO MORE: CITIZEN SCIENCE

Want to help wildlife beyond your yard? Take it to the next level! Here are the web addresses of some great projects that put regular people to work helping map, track, count, and aid wild animals of all kinds. Citizen scientists rock!

W Audubon Christmas Bird Count
www.audubon.org/conservation/science/christmas-bird-count

Join thousands of birders in two yearly counts of our feathered friends.

W Bumble Bee Watch

<https://www.bumblebeewatch.org>
Upload photos of bumblebees to help find out where they're in trouble.

W FrogWatch USA

www.aza.org/frogwatch
Join up with a local chapter to find out how to help frogs and toads.

W The Great Backyard Bird Count
<http://gbbc.birdcount.org>

W Journey North

www.learner.org/jnorth
Track migrations of hummingbirds, American robins, orioles, swallows, cranes, gray whales, butterflies, and bald eagles, as well as report on when trees leaf out and frogs start singing. There's a project for everyone!

W Lost Ladybug Project

www.lostladybug.org/participate.php
Which kinds of ladybugs are thriving where you live? Help find out by uploading your photos.

W NestWatch

<https://nestwatch.org>
Experts need information on the health of nesting birds across the continent. You can help by monitoring bird nests in your area.

W Project FeederWatch

<https://feederwatch.org>
Identify and count birds coming to your feeders during winter.

W Western Monarch
Milkweed Mapper

www.monarchmilkweedmapper.org
Submit sightings of monarch butterflies west of the Rocky Mountains.

DOWNLOAD IT

W Bat House

www.batcon.org/resources/getting-involved/bat-houses
Find everything you need to know to build a successful bat house from Bat Conservation International.

W Bumblebee Box

www.xerces.org/fact-sheets
Click on Nests for Native Bees under Bee Nests to download plans for a bumblebee box, as well as other native bee nests from the Xerces Society.

W Pollinator-Friendly Plant Lists
<https://xerces.org/pollinator-conservation/plant-lists>

Choose the list for your region, download, and get planting.

W Wild Notes Notebook

<https://www.storey.com/wildlife-ranger-downloads/>
Download pages for your notebook.

W Window Cling Patterns

<https://www.storey.com/wildlife-ranger-downloads/>
Download fun patterns for making window clings.

W Wooden Bird Nest Box

The Cornell Lab of Ornithology
<https://nestwatch.org/learn/all-about-birdhouses/>
Choose a bird and download plans to build it a nest box. And there's info on adding a webcam!

INDEX

italic = illustration of an animal or its tracks

B

- Baltimore Oriole, 49
- bats, 146–47
 - big brown bat, 152
 - Mexican free-tailed bat, *140*, 161
- bear, black, 153
- bees, 72–75
 - mason bee, 90
 - yellow and American bumblebee, *71*, 97
- Blue Jay, 28, 53
- Bluebird, Eastern and Western, 57
- butterflies, 70, 76–77
 - monarch butterfly, 91
 - tiger swallowtail, 96, *172*

C

- Cardinal, Northern, *44*, 60
- centipede, 9, 12, 71
- Chickadee, Black-capped and Carolina, 51
- chipmunk, eastern, *21*, *139*, 142–43, 157
- cicada, periodical, 93
- coyote, 155
- crickets, 70, 71, 83, 88
- Crow, American, *12*, 46

D

- deer, *140*, 148–49
 - mule deer, 162
 - white-tailed deer, *140*, 170
- dragonfly, green darner, 69, 85
- Duck, Mallard, *10*

F

- finches
 - Goldfinch, American, 37, 47
 - House Finch, 59
- Flicker, Northern, 61
- fox, red, 9, *138*, 166
- frogs, *119*, 120–25, 128–89
 - American bullfrog, *119*, 130
 - chorus frogs, western and spotted, 136
 - gray tree frog, *118*, 132
 - green frog, 8, 133
 - spring peeper, 136

G

- Grackle, Common, 55
- grasshopper, differential, 83
- Grosbeak, Black-headed, 52

H

- harvestman or daddy longlegs, *71*, 87
- Hawk, Red-tailed, Cooper's, and Sharp-shinned, 62
- hummingbirds, 34–36, *44*, 79
 - Ruby-throated, 63
 - Rufous, 64

J

- Junco, Dark-eyed, 56

K

- katydid, and fork-tailed bush katydid, 88

L

- lady beetle, 71, 89
- lizards, 100, *100*, 102–3
 - anoles, green and brown, 99, 114
 - collared lizard, 109
 - fence and Western lizards, 112
 - five-lined skink, 113

M

- Magpie, Black-billed, 50
- mice, *21*
 - deer mouse, 156
 - white-footed and house mice, 156
- moth, cecropia, 81

O

- opossum, Virginia, 169
- Owl, Great Horned, 7, 58

P

- pill bug, 71, 94
- porcupine, *10*, 164
- prairie dog, black-tailed, 154
- praying mantis, 24, 95
 - Carolina mantids, 95

R

- rabbits
 - black-tailed jackrabbit, 158
 - eastern cottontail, *138*, 158

- raccoon, 165
- Robin, American, 9, 29, 48

S

- salamanders, 100, *100*, *118–19*
 - red-backed salamander, 134
 - red-spotted newt, 135
 - tiger salamander, 137
- shrew, Northern short-tailed, *13*, *21*, 163
- skunk, striped, *138–39*, 167
- slug, banana, 80
- snail, grove, 9, *71*, 86
- snakes
 - black rat snake, 108
 - common garter snake, 99, 110
 - kingsnake, 115
 - ringneck snake, 117
- sparrows
 - Savannah Sparrow, 27
 - Song Sparrow, 65
- spider, garden, 69, 84
- squirrels, 7, *21*, *141*, 144–45, 150–51
 - eastern gray and fox squirrels, 159
 - thirteen-lined ground squirrel, 168
 - woodchuck or groundhog, 171

T

- Titmouse, Tufted and Black-crested, 66
- toads, 120, 126–67
 - American and Woodhouse's, 131
- turtles, 101, 104–7
 - box turtle, Eastern and ornate, 98, 111
 - Painted turtle, 116

U

- vole, meadow and woodland, 160
- Vulture, Turkey, 67

W

- walking stick, common, 82
- wasp, paper, 92
- wolves, 155
- woodchuck, groundhog, or whistlepig, 171
- worms, 71
- wrens, 31, 144
 - Carolina Wren, 54
 - House Wren, 27